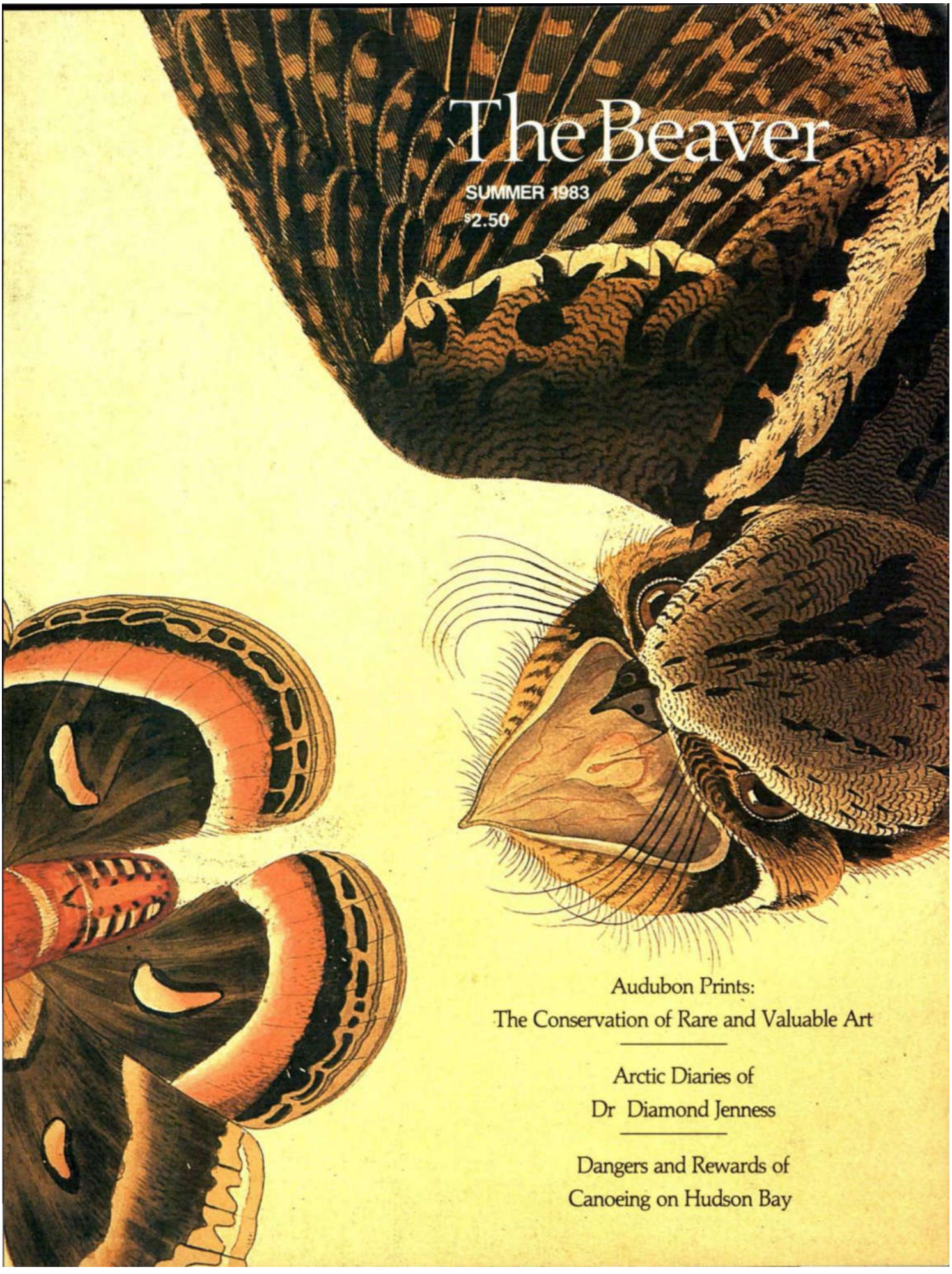

# The Beaver

SUMMER 1983
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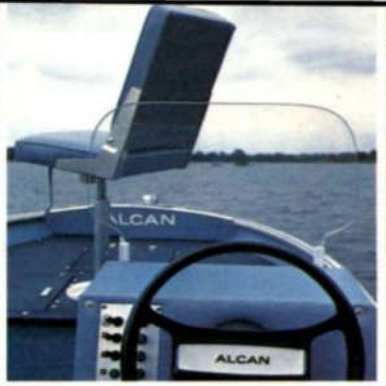
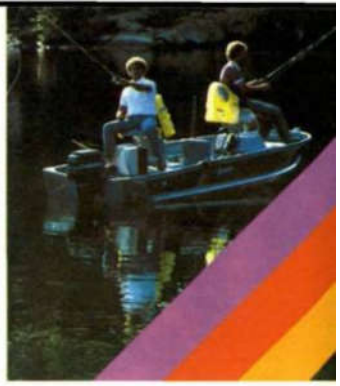
The Conservation of Rare and Valuable Art

Arctic Diaries of
Dr Diamond Jenness

Dangers and Rewards of
Canoeing on Hudson Bay



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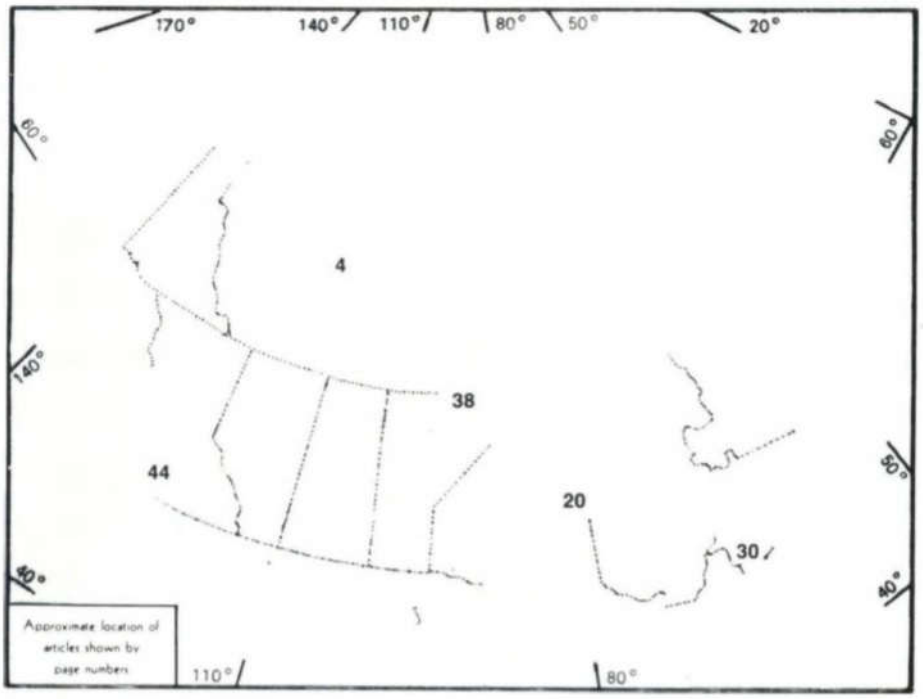
SUMMER 1983
OUTFIT 314:1
(Issued July 1983)
$2.50

# The Beaver

## MAGAZINE OF THE NORTH

*Editor: Helen Burgess*
*Assistant Editor: Carol Preston*

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**COVER:** Detail from the 'Whip-poor-will', hand-coloured print from J. J. Audubon's 'The Birds of America' in the collection of the New Brunswick Legislative Library, Fredericton.
Photograph by Charles A. E. Brandt.

PUBLISHED QUARTERLY BY

HUDSON'S BAY HOUSE
77 MAIN ST.

Hudson's Bay Company

WINNIPEG, CANADA
R3C 2R1

Published by The Governor and Company of Adventurers of England Trading into Hudson's Bay, known as the Hudson's Bay Company. The interests of THE BEAVER cover the territory with which the Company has been or is now associated. Annual subscription $10 (Canada and United States). Single Copy $2.50. Other countries annual subscription $12. While every care will be taken of manuscripts and illustrations submitted, no liability will be assumed for loss. Contents copyright. Printed in Canada.

Second class mail registration number 1401. Postage paid at Winnipeg.

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ISSN 0005-7517

# The Expedition Diaries of Diamond Jenness, 1913-1916

## By Leslie H. Tepper

*Leslie Tepper is a graduate student in anthropology at Carleton University, Ottawa, and is with the National Museums of Canada Library.*

*Diamond Jenness (1886-1969) from a photograph taken in 1913.*

(50806)

*The author acknowledges the kind co-operation of the Jenness family in permitting the selection and publication of excerpts from the personal diaries.*

*Photographs are published by permission of National Museums of Canada; National Museum of Man.*
*The word 'Eskimo' follows Jenness's usage at the time, and refers to both Alaskan Eskimos and Canadian Inuit.*

***Saturday, September 20th, 1913:*** *The morning was fine and clear with a mild easterly wind blowing. We were busy making preparations for our departure, Stefannson*, Wilkins, McConnell and myself with the two Eskimos Pauyuraq and Acicaq. It was after dinner about 1.30 p.m. when we got away and we travelled continuously until 6.30 p.m. We have 2 sleds with 6 dogs each; 2 tents, both with a single centre pole, 2 stoves, one for alcohol which can be lit quickly but gives little heat, one for burning wood, an aluminum cooking set, provisions for 12 days, skis, rifles and a few odds and ends. We expect to be away about a week caribou-hunting on the mainland to obtain a little fresh meat.*

Thus begins the first of Diamond Jenness's personal diaries, written over the three years that he was a member of the Canadian Arctic Expedition, 1913-1916. Now 70 years later and almost 100 years after Jenness's birth, restrictions on publication of extracts from the diaries have been lifted. The personal record offers an intriguing account of the formative experiences of the young anthropologist on one of Canada's most important scientific expeditions.

Diamond Jenness was to become chief ethnologist of the National Museum of Man. Here he made important contributions to the fields of arctic anthropology, Canadian ethnology and applied anthropology. His book *Indians of Canada,* written in 1932, is considered the best reference volume available on the subject. The expedition was his introduction to Canada and her native peoples.

During his three years in the Arctic, Jenness documented a way of life which had been unchanged for a thousand years, but which would disappear with stunning rapidity within his own lifetime. Through his many professional publications and articles Jenness reported the ethnographic details of this culture. In his books *Dawn in Arctic Alaska* and *People of the Twilight* he conveyed a sense of the adventure of the expedition. Yet as William E. Taylor Jr and Henry B. Collins noted in Jenness's obituary, 'Few now living can comprehend what

* *Jenness consistently spells Stefansson's name as Stefannson.*

a demanding, dangerous and rich experience it was.' These diaries are an aid to such comprehension. In them are recounted both unexpected adventure and occasional tedium. Evident throughout is his compassion, his understanding of the people he lived with, a dry but quick sense of humour and an intense love of life.

The image of the young man who emerges from the three volumes is complex and intriguing. Still in his early twenties with only the experience of one short season of field-work, he was suddenly immersed in the foreign culture of the Eskimos. He had to cope with long periods of illness, isolation, physical exhaustion and even starvation. Quick-witted and imaginative, he avoided being accused of a witchcraft murder by assisting a local shaman in a seance. Using first Latin and then French, Jenness responded to the shaman's 'wild gibberish' and together they placed the blame for the sudden death of a young Eskimo man on a 'white man a long way off'.

His personal courage appears repeatedly through the absence of the discussion of danger. Sudden separation from the expedition's ship, hunger, blizzards, attacks by a wolf or periods of wandering lost in the snow, are all barely recorded. Diary entries on such subjects are immediately followed by some ethnographic detail or a description of the weather.

Yet the first time a wife exchange occurred among the Eskimo families with whom he was staying Jenness was shocked.

***Friday Dec. 11th:*** *There was an interesting insight into the customs of these Eskimos last night. After supper Itoqunna disappeared, & Niq entered the house. I was playing cat's cradle with 3 of the children. She took Itoqunna's place & a little later turned into bed. Itoqunna I believe slept with Niq's husband Akhiatak — an exchange of wives for the night — very likely in connection with the change from the summer hunting of caribou on land to the winter's sealing on the ice. . . . The custom is of course well known among savages from books, but strangely enough it shook my nerves more than anything else I have seen in the Arctic — even more I think than Andrew Norham's suicide.*

[Norham, cook on the ship *Mary Sachs* blew his brains out with a shotgun following a period of increasing depression. Jenness had only moments before passed him in the entrance to the living quarters at Camden Bay.]

Jenness's strong sense of privacy is clear in these diaries. Before leaving for the North, he made certain that any private diaries or journals would belong to him and not to the expedition sponsors. Still, in general, the entries are impersonal and focus mainly on ethnographic records. Only rarely, at times of great stress or isolation from other members of the expedition, did the diaries play a role of confidante. Usually writing late at night while lying in his sleeping bag, Jenness occasionally indulged in Shakespearian references, Latin quotes and classical Greek phrases. These seemed to reassure the Oxford-educated scholar that there was a world beyond the primitive conditions which surrounded him.

*On the Stefansson Expedition to the Western Arctic, Canada's famous anthropologist lived—and nearly died—with Eskimo families. Here, for the first time, excerpts from his personal diaries are published.*

When Diamond Jenness began his diary he had been a member of the Canadian Arctic Expedition for six months. Born in New Zealand in 1886, he studied anthropology at Oxford and gained his first field-work experience in Papua, New Guinea. The arctic adventure began when he received a cablegram that invited him to 'join the Stefansson Arctic Expedition and study Eskimos for three years. Reply collect'. Jenness accepted and by 6 March 1913 had joined the other members in Vancouver. The expedition, funded by a special act of Parliament, included botanists, geologists, zoologists and two anthropologists, Diamond Jenness and Henri Beuchat. Jenness's assignment was to study the non-material aspects of Eskimo culture: shamanism, social organization and religion. Beuchat, a French ethnologist who had studied at Oxford with Jenness and Marius Barbeau, was to be responsible for linguistics, material culture and physical anthropology.

The expedition members spent three months in Vancouver preparing equipment and buying supplies. Their leader, V.A. Stefansson had purchased an old 250-ton whaling steamer, the *Karluk*, and on 13 June twelve scientists and the ship's crew sailed from Esquimalt up the inside passage to the Gulf of Alaska, through the Unimak Pass to the Bering Sea and on to Nome, Alaska. There two more whaling ships, the *Alaska* and the *Mary Sachs*, were purchased and final plans and preparations were made. The expedition now divided into two groups. The northern party, responsible for geographical exploration and mapping of new arctic territory was to travel under the command of Stefansson in the *Karluk*. The southern party, on the two whaling ships, would winter around the Coronation Gulf conducting biological and anthropological research. Since space was lacking on the smaller ships, Jenness and Beuchat, members of the southern party, were temporarily assigned to the *Karluk* for the passage north.

The expedition set forth for Herschel Island near the Mackenzie River. Strong west and northwest winds forced the pack ice in along the coast where the two smaller boats with shallower drafts moved into safety, while the *Karluk*, stuck in pack ice, drifted slowly westward from the Mackenzie River area to near Point Barrow. As the cold became more intense the ice stopped drifting, the ship was grounded, and the men aboard the *Karluk* faced the prospect of remaining trapped there for the winter.

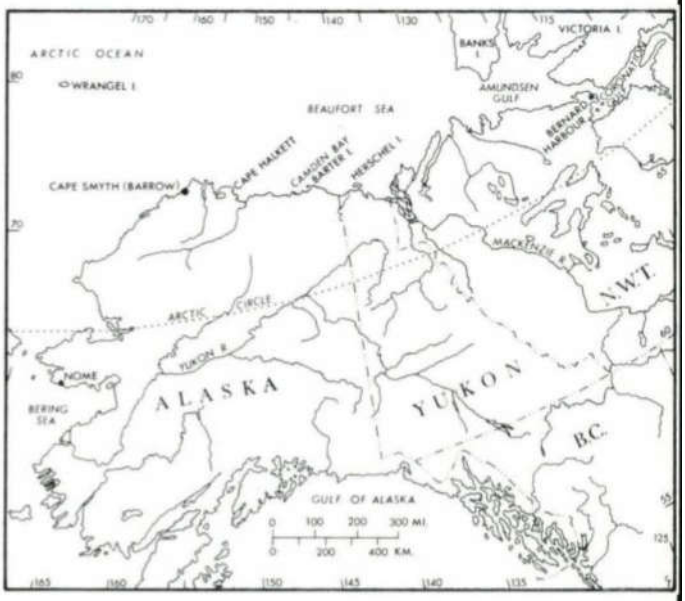
Jenness's diary begins at the point when Stefansson suggested that a hunting party be sent out to secure fresh meat. The group consisted of Stefansson; Wilkins, the photographer; McConnell, Stefansson's secretary; two Eskimo hunters and Jenness who was included because Stefansson wanted him to gain experience in sled travel.

In the first few diary entries the danger of their unexpected situation unfolds. The first day away from the *Karluk* the hunting party travelled four to five miles, saw a few animal tracks, but did not manage to shoot any game. By the end of the second day, Jenness estimated that they had covered 12 miles. By standing on a large hummock of ice, they could still see the masts of the *Karluk* through their binoculars. Plans were made for McConnell to return to the ship in the morning.

***Tuesday, September 23rd:*** *Wilkins, anticipating McConnell's departure for the ship had breakfast ready by 5 a.m. — crumbled biscuit boiled, bacon, hard biscuit and molasses. The wind however had increased during the night, creating small leads of open water to the north, so McConnell could not leave after all. Stefannson feeling rather unwell retired to his tent after breakfast and slept until 10 a.m. Wilkins & I skinned & cleaned the ducks & put them on the fire while McConnell went down to the pool of open water to try and secure some more. The Eskimos reported a considerable crack to the north, consequently the wind must be driving the ice westward & probably carrying the Karluk with it. At present we are unable to reach either her or the mainland.*

The weather over the next few days alternated between fog and gale-force winds. The men spent their time hunting for ducks and seals, cooking, sleeping and listening to Stefansson talk endlessly about Eskimo customs, myths, medicines and his personal adventures. Stranded on a small island, surrounded by thin ice which was barely capable of supporting their weight or that of their sleds, the hunting party vacillated between waiting for the return of the *Karluk* or making their way to a settlement.

***Friday, September 26th:*** *. . . There was great excitement toward noon. Stefannson had been searching the north with the binoculars and thought he saw the Karluk standing in towards us. He called the 2 Eskimos & McConnell, & proposed to kindle a large fire on the highest part*




*of the island (about 10 ft. above sea level). This however seemed useless so they erected a kind of platform from which to watch the movements of the supposed vessel. . . . The dark spot which seemed to be a vessel with its sails set travelled rapidly eastward & by 3:30 was no longer visible.*

The days spent waiting for the *Karluk* to reappear and pick them up served as Jenness's introduction to the Arctic. He discovered that 'seal meat is much darker than other meat, but tastes all right'; and that his sleeping bag was too long and too wide and consequently his feet were so cold he could not sleep. To add to his discomfort he was suffering through recurrent bouts of malaria (ague), a residue of his field-work in New Guinea.

By Thursday, the first of October, they decided to leave for Cape Halkett about 70 miles away. Their departure was delayed, for in the morning Stefansson 'saw something to the east which might be either a post or the mast of the vessel.' McConnell was sent to check while Stefansson went caribou hunting and the rest of the party went back to their original campsite to wait for the ship. By nightfall when neither Stefansson nor McConnell had reappeared, Wilkins set two large fires burning. Stefansson was back in camp by 9 p.m., but though the fires were kept burning till 3 a.m., McConnell did not arrive.

***Friday October 3rd:*** *The night was very cold and we all felt it. At breakfast time—6 a.m.—the weather was clear & the sun shining. Wilkins & Pauyuraq went off to look for McConnell taking a sled with them. They found him on his way to camp, about a mile off. He had arrived at our old camping ground 4 miles to the eastward about 6.30. The ice round the island was very thin & he had fallen through up to his knees. Darkness coming on he*

(43253)

*Diamond Jenness with a group of Copper Eskimos.*

*The settlement at Cape Smyth (Barrow), 1913. Here the local trader, Charlie Brower, replaced equipment lost on the 'Karluk'.*

(51455)

*decided to stay on the island for the night & dry his clothes. From the logs we had used for a wind-break he built up a huge fire & tho' he did not sleep he did not suffer from the cold. The mast of a ship, he told us, had resolved itself into a stack of logs 6" or so in diameter. I cooked an early lunch, rice mixed with a tin of meat, biscuits and neruk.aq (a mixture of molasses and lard) & chocolate. By 1 p.m. we were packed up & set out westward, Stefannson going a short way out on the ice to the northward to look for the Karluk.*

The next few days were an exhausting, painful initiation to travelling in the Arctic. They had only three more days of dog food left and were running low of food supplies for themselves. The dogs, on short rations, did not pull the sleds well. Both Jenness and Wilkins had each hurt a foot and they found walking painful and slow.

***Saturday October 4th:*** *At lunch time a slight attack of ague came on so I was wrapped inside my sleeping bag & lashed on top of the sled. Then we continued our journey westward, with two breaks once for Aseqcaq to stalk a seal, once for Stefannson himself; both attempts were unsuccessful. . . .At dusk we came to thin ice — a dog in each team fell through it — and were compelled to camp on a very small keg of ice.*

They finally encountered some local Eskimos the following day. Just south of their trail, they spotted a tent and rack, which they discovered belonged to a man named Aksiatak. Stefansson had met him during his earlier travels. Jenness's first ethnographic entry shows an attention to detail which characterizes his records in all three diaries.

***Sunday Oct. 5th:*** *. . .Aksiatak helped us to pitch camp, then invited us over to dinner. Here is the menu.*

*1st course — frozen fish — raw with dried raw caribou*

*Eskimo family migrating.*

*fat (this latter is a very great delicacy & very expensive) & rancid seal oil*

*2nd course boiled ptarmigan*

*3rd course boiled fish (heads & all)*

*4th course tea*

*We changed our footgear in their tent and the lady of the house took charge of it all & hung the boots etc. on the cord & sticks of the ceiling to dry. In blowing the fire the woman did not purse her lips as we did but curled her tongue so as to make a kind of funnel . . .*

Refreshed, rested and resupplied from Aksiatak's huge cache of fish the party moved on to the settlement at Cape Smyth (Barrow). They were warmly greeted by the local trader who immediately began making replacements for the equipment they had lost on the *Karluk*. News had arrived that the *Alaska* and the *Mary Sachs* were safely in harbour at Camden Bay and would pass the winter there. Still no information had been received about the *Karluk*. (In fact it was the following spring when they learned that the *Karluk* had been crushed in the ice and that only a few of the expedition members had survived on Wrangel Island. Henri Beuchat was among those who had died.)

Their safe arrival at Cape Smyth marked the end of a month of physical and emotional hardship. Jenness, regaining his physical strength, also began for the first time to write more than a simple record of events and ethnographic information.

*The colouring out of doors was very beautiful. The sea is still open along the shore, with here and there a small floe gleaming white on its sombre surface. Subdued orange and other tints gathered around the sun, and the water assumed a soft greenish tint such as I have seen nowhere else. It was pleasant to hear the lapping of the waves on the beach, and to see the tiny pebbles rolling to and fro.*

Other emotions began to appear, such as annoyance at Stefansson when he announced that only Jenness and Wilkins were to leave for Cape Halkett where they would catch fish to supplement the expedition's food supply. Stefansson and McConnell would join them several weeks later.

***Monday Oct. 27th:*** *Up at 4:30 (the local time is about an hour slow) & proceeded to load the sled. We had almost finished by breakfast time 6 a.m., but after breakfast Stefannson examined the sleds, condemned the manner of loading & reloaded them himself. The loads are very heavy, probably between 600 & 700 lbs on each sled. We got away finally about 7.45 a.m. . . . Stefannson is sending us on ahead to save the expense of our board at C. Smythe, so he told us; it seems a very absurd reason, when he throws $1000 dollars away without second thought on things of little or no use.*

Jenness however seemed to welcome the activity after the stay at Cape Smyth. He and Wilkins and their Eskimo companions travelled steadily during the day, stopping only for lunch and moving on till dusk. Setting up camp and cooking dinner was becoming a routine activity.

*Boiled bear meat, biscuits (which we made of flour, baking powder & water) hard bread biscuits, butter nerukaq & tea formed a sumptuous dinner. The dogs have been very tired both today & yesterday. We make very slow progress, the loads being so heavy. This is fortunate for me because I have no breath to travel fast, but can walk a medium pace for a good while.*

On the fourth day out they struck a 'mild blizzard' and hurriedly camped on a small keg of ice, the only suitable water supply they had found in some time. This was Jenness's first exposure to a major arctic storm.

***Friday Oct. 31st:*** *Wilkins' birthday — 25th — His last —his 24th—he was chased by Bulgarian cavalry—this one he was greeted by a blizzard in the middle of Smith Bay where two white men & an Eskimo were lost not many years ago, and after wandering aimlessly for some time froze to death. Snow was drifting about in the tent and covered everything — even our sleeping bags.* Caribou biscuits & tea cheered us up a bit & then we began to load the sleds. First however they had to be dug out of the snow—as for the dogs they were almost invisible. [Footnote from diary] *Both Asecaq & Anutisiak were crying at this meal, & they said a prayer, the only time they ever did.*

The days at the fishing lake passed with little success in fishing or hunting. The diary, however, is filled with drawings and notes on various Eskimo techniques and customs. Jenness became better acquainted with the Eskimo families and had a special fondness for the children.

*Wilkins and the 2 Eskimos then went down to the lake to examine the nets—there were 25 fish in all, an improvement on yesterday. I stayed to cook & received a state*

*visit from two of our neighbors, the two children, a boy & a girl, who ate mukpaurat (biscuits) and drank tea & gossiped as though to the occupation born.*

The fishing was not as successful as expected. Instead of the hundreds of fish needed for the expedition only 20 or 30 were regularly caught in the nets and Jenness became increasingly impatient with the situation.

***Friday Nov. 14th:** . . . Our sugar is now exhausted; we are using saccharin with the tea—it seems to sweeten it all right. We have used up 10 lbs. of flour in 8 days & 20 lbs. of sugar in less than 3 weeks. Of course rice & oatmeal have used up much of the sugar; of the latter we have used rather less than 20 lbs in 8 days. Stefannson, in the written instructions he gave Wilkins when we left, said that he would be here the 7th; it is now the 14th & he has not yet arrived.*

***Monday Nov. 17th:** The dogs are becoming woefully thin, for we have insufficient food to give them. . . . Two fish a day is their allowance, & yesterday & today we gave them some porridge as well. We had dinner—beans rice mukpaurat & tea—about 7 o'clock. Another day has passed & still Stefannson cometh not . . .*

***Tuesday Nov. 18th:** . . . Another day without any sign of Stefannson. How often our plans (if one may call them plans) have been changed. When the Karluk disappeared he determined to go to Herschel Is. Suddenly he chose Point Barrow instead, intending to go to Herschel subsequently. We must be at Herschel—he said—by Nov. 20th, the time the sun disappears.*

Stefansson finally arrived about midnight on 21 November. While the rest of the expedition now travelled on to join the southern party at Camden Bay, Jenness remained with Aksiatak's family. There for the rest of the winter he learned the language and recorded ethnographic information on folklore and customs. A sled and 6 dogs ('the worst') were left for him. Two hundred pounds of food, consisting of 60 lbs of rice, 75 lbs of sugar, 18 or 21 lbs of dried vegetables, 25 lbs of prunes, 20 lbs of macaroni, one cheese and one tin of coal oil had been cached for him near Cape Halkett. Stefansson promised that additional supplies would be sent around Christmas from the expedition headquarters at Camden Bay.

The diary entries indicate how easily Jenness settled into a comfortable relationship with Aksiatak, his family and the other Eskimos living in the area. The passing of the days were noted by a recital of the daily routine and activities of people's comings and goings and a record of the weather. During the day Jenness's time was spent hunting, writing notes on clothing, games and material culture while observing and analysing the social interactions of the group. The evenings were spent in repairing tools, teaching and playing with the children, learning new string figures, singing and story-telling. Sensitive to the small domestic scenes he viewed in the daily lifestyle, Jenness enjoyed sketching them verbally in his diary.

(43263)

*Bernard Harbour, headquarters of the southern party, 1914-1916.*

*The scene last night when Otoyuk was telling her story was worthy of a painting. We had just dined. The others were reclining in the skins and sleeping bags & the boy was playing with Siluina behind them. I sat on the primus stove box (an old ammunition box cut down) & stoked the fire, trying to get warm. Two foxes, frozen still, were hanging by the stove to thaw. Otoyuk began to speak then stopped. 'Jennie' she said (this is the nearest these people can get to my name) 'listen'. Slowly and impressively she uttered each word, interrupted now & then by an eager question from Brick. From time to time a smile lit up her careworn face & at the end she gave a half apologetic laugh. 'My father told me that story' she said, 'when I was a little girl,' then murmured over again the chant that formed a part of the story.*

Jenness responded to the Eskimo story-telling with some of his own: 'the old Greek stories about Atalanta and her suitors', 'the theme of the Arabian Nights, the mise-en-scene', and 'some of Tom Sawyer'.

As the winter progressed, the field-work situation became increasingly difficult. The frequent blizzards and the short dark days kept the people confined to the tiny crowded house. The food, never appealing, became monotonous and sometimes scarce. New Year's day offered Jenness an occasion to stand back and take stock of his unusual situation.

***Thursday January 1st 1914:** . . . Meanwhile here am I, the ethnologist on the Canadian Arctic Expedition, living in a tiny one-roomed house of driftwood, turf & snow that I helped myself to construct, with an elderly lady of perhaps 35-40 years & her two children, a girl of about 8 & a boy of 2 years. For food we have a little rice, which we boil, frozen fish which we eat raw, skinning & slicing*

*them, I with my sheath knife, the other two with their curious shaped ulu. . .*

The sled with supplies which Stefansson had promised to send from the base around Christmas did not arrive. His cache of food seriously depleted, Jenness had his first taste of starvation. 'For supper I had 3 boiled fish-heads (scales & all) then ½ a frozen fish & 2 fragments of hard bread. We have been living on ½ rations for some days, tho' the others supply the deficiency with blubber. Hard bread never tasted so good as this did.'

Two of the Eskimo men had gone to one of the caches; their return had been expected for several days.

***Saturday Jan. 3rd. 1914:*** *I slept very little through the night being both hungry and cold. We had breakfast about 9 a.m. a little rice (our last) & ½ a frozen fish. All that we have left now is ½ a doz. fish, some sugar & tea, but Brick and Itaqluq should be back this afternoon. (Later) I was chopping wood most of the day save when I helped Otoyuk make a snow wall ½ way around the house. She also put fresh turf on the roof around the skylight and stovepipe. We were inside, eating ½ a frozen fish each when Brick and Itaqluq came about 2 o'clock. They brought 4 bags of flour & about 2 cupfuls of rice . . . Some of the rice was boiled at once & Otovuk made mukpaurat, so that about 4 o'clock I was having the best meal I have had for several days. I was ravenously hungry & could have eaten twice as much, but it was a good meal all the same. I suppose it is the lack of sufficient food, combined with sleeplessness & rather hard work the last 3 days which has made me feel weak . . . The children have not suffered, that is one comfort, but Otoyuk said yesterday we were starving, & I am afraid she too has not been getting enough to eat. However the pinch is over I think. I half expect the sled from the Alaska to come about the 10th of this month. The little boy Katairoaq has very cleverly contrived mittens.*

When, by the end of January, the sled from the *Alaska* had still not arrived, Jenness returned to Cape Smyth. There he stayed until late February, when McConnell arrived from Camden Bay. The two men then returned together to join the southern party.

The months spent at Camden Bay with members of the expedition were a period of delightful recovery for Jenness. He spent time writing up his notes and drawings, rummaging through the books and equipment which had survived on the *Alaska* and *Mary Sachs* and enjoying the range and variety of foods available to him. In June he went to Barter Island to conduct archaeological research and collect zoological and botanical specimens for the other scientists. After a satisfying and productive day, he noted in his diary:

*Ikpuk jigging for fish.*

*It is very pleasant to lie in my sleeping bag at rest & listen to the waves once more lapping on the shore. The earth is very musical just now — the birds & the sea & flowers & the bright warm sun (when the day is fine) make one long to be idle & lie down on the grass & sleep beside the murmuring water. Yet I have never been busier than I am now.*

The expedition was to move on to new headquarters at Bernard Harbour and Jenness hurriedly packed his finds from the site at Barter Island. He arrived at 11 p.m. to find 'Everyone was on board the vessels except Johanson, the Dr. [Anderson] and Olson who were looking after the dogs. The vessels had practically finished loading & were hoping to get away tomorrow. We had come in the nick of time.'

The voyage from Camden Bay to the new headquarters took nearly a month. The expedition, divided among the three ships the *Alaska, Mary Sachs* and the *North Star* threaded its way eastward through the ice floes. Jenness, assigned to the *North Star,* shared duties with two other crew members. The passage alternated between days of peaceful floating and violent storms.

***Thursday Aug. 6th:*** *Here & there were scattered kegs of ice, some of great size & height—the tallest probably more than 20 ft. . . . Some were wonderfully beautiful, with deep horizontal flutings where the ice had washed or melted out when the keg floated at different levels. The delicate pale green tinge beneath a crest of overhanging white attested its purity from salt. Other kegs were dark & one or two in the distance appeared quite black, changing to brown as we approached. 'Dirty ice', it is called, & so it should be called in winter. But in summer, as it floats on the dark rippling water with the bright light of the sun radiating over everything, it loses its sinister as-*

(17036)

*After a good day of hunting caribou meat was laid out to dry on sleds, stones and boards.*

*pect and gathers something of the soft sad charm of the sunset.*

Relations among the crews of the three boats were not so peaceful. 'The Alaska people were swearing at the Sachs & the Sachs at the Alaska all the time they lay beside each other yesterday & the day before; there was a hostile civility between the two vessels which both found intolerable.' At Herschel the *Mary Sachs* unloaded supplies and left to spend the winter trapping.

Jenness also recorded their battles against early winter gales. One particularly bad storm came up while they were at Herschel.

***Saturday Aug. 15th:*** *The wind increased to a violent gale soon after midnight. . . . About 4.30 the vessel began to drift dragging her two anchors. I was asleep at the time, but awoke a moment later for she turned broadside on to the gale and rolled heavily. A nasty sea was running and the spray swept the deck . . . The schooner drifted rapidly down onto the beach as if she were under steam & soon she was pounding the bottom broadside on to the wind, & swept by the seas . . . The temp. was 33° F. & we were soaking wet with the waves that had broken over us & numbed by the furious gale. We made for the Police Barracks, which opened its doors hospitably & made us welcome . . . This is another misfortune with which the expedition has to contend; truly it has had fearfully bad luck.*

On Friday, 28 August, he wrote 'We are safe in our winter harbour, Bernard Harbour as it will probably be called, after its discoverer', and began one of the most important ethnographic field-work experiences in the history of Canadian anthropology. Jenness was determined to join an Eskimo family and spend the summer hunting season along with them on the tundra. The seasonal cycle of hunting was not well understood and had never been studied. But first the boats had to be unloaded, a turf hut built to house them and the meteorological equipment set up. The expedition prepared for two more years of research and isolation.

Some time passed before the first groups of migrating Eskimo families passed near Bernard Harbour. By late fall Jenness had established trading relationships with nearby Eskimo settlements. His collection of artifacts, physical anthropology measurements and songs, recorded on wax cylinders, quickly grew. He continually referred, however, to the problem of finding the best family to join for the summer season. 'Wikkiaq's people wanted me to sleep in their house last night & Ikpukkuaq repeated today his proposal of yesterday to the same effect, & also asked whether I was not going to use him & his people to take me to the Kanghirjuagmiut in the spring. This is making Haviuyaq very uneasy; he is beginning to realize that my choice of him & his wife depends on how I like them this winter.' Jenness finally made his decision; on 12 April 1915, he joined Ikpukkuaq and his family noting in his diary: 'Probably I shall not return to the station again before November.'

The choice proved to be a wise one. '. . . they are treating me very well—as suits their own interests of course—but I really am much more comfortable among these Eskimos than I have ever been before.' Later he wrote 'so far I have every reason to be satisfied with Ikpukkuaq & his family, despite many "peculiarities" rather repugnant to a European but natural to them.'

Alone with his family and a fluctuating number of other families who travelled with them, Jenness soon immersed himself in Eskimo life. Two months after moving in with Ikpukkuaq's group he noted, 'I am growing

*Backpacking. Jenness estimated some of the loads must have weighed 150 pounds.*

Eskimo in my ways—care less about dirty pots or dirty person—drink more cold water—tend to have my mouth agape when travelling. It requires an effort to keep white.' One evening when the women went out to gather brush for fuel 'some of us went along like bees sipping at every little thimble-ful of water we could find in the cracked soil of the ridges.'

Most passages in this volume of the diaries are concerned with food, the hunting, preparation, eating or sharing of it. Hunting was the main preoccupation, the only means of their survival. All too often the hunt ended in failure and frustration.

***May 9th:*** *We migrated to the land this morning, a distance of some 4 miles. On the way 2 caribou were sighted & Avrunna & I pursued them. I fired 3 shots at long range but missed; we could not approach close to them for they had seen us almost as soon as we saw them. Avrunna went after some others seen a little later but met with equal unsuccess. . . . I had just finished this [building a snow hut] when 2 caribou were sighted & I had to go in pursuit but they saw the camp & fled far inland. Returning I fell in with Avrunna & we returned together only to leave immediately in pursuit of some caribou sighted to the east. This led us about 2 miles but we secured a caribou each; a third was lamed but got away tho' we followed it for a mile or so.*

There were days of good hunting, however, when the caribou meat was laid out to dry all over camp on sleds, stones, sealskins and boards. Occasionally rabbits and ptarmigan provided a meal.

Though kept constantly busy with the search for food, Jenness managed to spend some time leisurely collecting plants, geological specimens, birds and other objects for the scientists back at Bernard Harbour. He seemed to need these moments of peace and solitude. 'Flowers too are blooming & the sky is often very lovely especially in the evening when the sun is low in the north. Were it not for these life would be almost unendurable.'

He was becoming increasingly ill with the eating of raw and dried food. 'My stomach is badly out of order these last few days. An insatiable thirst possesses me, & parches my mouth & throat; . . . I try to limit the quantity of water I drink, but it is very hard with beautiful clear cold streams at one's feet every few yards. The water is wonderfully transparent & blue — sometimes it almost fascinates me till I feel half constrained to dive under.'

***June 26th:*** *I was much comforted today by the sight of several brooklets running down the slopes, chattering & laughing in the glimpses of sunshine. There was a snow shower this evening. We are running short of food. The daily catch does not provide enough & our reserves of dried fish & dried caribou meat are nearly exhausted. The dogs are the first to suffer — they are all hungry. . . . Ducks are scarcer than they were. The outlook is not very promising. Summer when caribou may be expected to come again, seems as if it will never arrive. The constant theme of the Eskimos is the scarcity of fish.*

While the Eskimos consumed the small amount of fish they caught Jenness found the raw fish indigestible and preferred going hungry, and at times he became desperate. Every one in camp went out in search of food each morning, fanning out in all four directions. The few fish caught were shared by all but there were only 'about ½ enough'. On 1 July he wrote, 'fish . . . cooked for supper and for the first time for about a week I had as much as I could eat. Even a short tramp like today's tired me out, so weak have I become for want of food.' When he was too ill to search for food, he lay in his sleeping bag and read German or slowly worked his way through Homer's *Odyssey*.

Anxious to help, the Eskimos held a seance to drive out the spirits which were making him ill.

***July 16th:*** *. . . while writing this last Taqtu appeared & asked me to go over to their tent as she wanted to hold an [sic] 'consultation' over me — divining with my attigi. She took off the footgear from one of her legs & made a cushion of it for the attigi, then carefully rolled up the attigi — the sleeves tucked one in each side of the cape, & looped her belt round both neck & sleeves— resting the head of the attigi on the 'cushion.' Then she orated—'it's mighty unpleasant to be sick—what's the cause of it?' 'Uggoqtun' (are spirits oppressing you?) she asked me. I raised my eyebrows, 'Yes'. 'Who are you?' she asked & by a series of questions discovered it was a Wallinirmiut [Eskimo to the west]. I was told then to enquire its name & suggested 'Ayakuk'. The bundle answered 'Yes'. 'What are you doing here' said Taqtu. 'Jenness isn't here - he's far away. What do you want here?' & at her signal Ikpuk banged the hood & sleeves with the edge of the ulu.*

*That disposed of one spirit.*

Two other malignant spirits were similarly discovered and chased away so that 'there is nothing to prevent my becoming well'. The Eskimos felt themselves successful, but Jenness observed that 'personally I have more faith in the laxative I took this morning and the two pills of iron and arsenic tonight.'

Throughout this period despite his illness and great fatigue, Jenness still recorded some ethnographic data, a few drawings and his observations of social interactions.

***June 19th:** I was surprised at the weight of the loads these Eskimos carry; Oqalluk's pack must have reached 150 lbs, but his I think was unusually heavy. They have a broad deerskin strap across the forehead & a narrow sealskin strap (or 2 straps) or line crossing the chest & passing round the arms just below the shoulders. . . . Taqtu (Higilaq) yesterday had another 'confidential' chat with Qanajuq about her approaching maturity, & her possible marriage next winter; the child can't be more than 12 years old, hardly that I think. There is no pre contract. I asked Higilaq afterwards whom she was to marry & she mentioned a youth among the Qalliarmiut (Coppermine River Eskimos). I said 'Perhaps Qanajuq won't have him' & she replied 'Perhaps not'.*

Jenness also continued to gather stories, exchanging Aesop's Fables for Eskimo creation myths. Participation in shamanistic rituals was frequent, as Higilak tried to appease the spirits who kept away the caribou, made the fog or caused illness among her family. Jenness was called upon to identify the various spirits. '. . . she [Higilak] used my attigi at her old game of "qila", removing or rather discovering and appeasing the spirits of the offended dead who were creating the fog & the scarcity of fish. Some were the spirits of white men & I named them for her—William, Mary etc & at her direction told them we were friendly people, not evil minded.'

*Jenness packing boxes of specimens and books at the end of the expedition.*

His health however continued to deteriorate. Plagued by a painful stomach, violent diarrhoea, hunger, sleeplessness and mosquitoes which 'had I no veil would have eaten me alive', Jenness burst out 'I am heartily sick of Eskimo life with its filth & squalor & long for decent food & rest & quiet.' Yet immediately following this unhappy statement Jenness continued to record ethnographic observations. 'Eskimos have a curious custom with young pups; they pull their legs to make them grow big, & blow into their noses to sharpen their scent for seals. Little children too are "enlarged" by pulling at their arms and legs.'

In a more positive perspective Jenness wrote in the diary the following day, 'This sickness has been useful to me in one way at least; it has given me leisure for thought, which I have not known for a long time—I must confess however that a considerable portion of the time my thoughts run to the glorious feasts I shall have at the station & back in Canada—things which never occur to me when in health.'

***July 25th:** . . . My dysentery is less violent & I am hoping for a speedy recovery. It is about time — I am so weak I can hardly crawl about. The Eskimos are speculating as to whether I am going to die & ask me if the folks at the station will be angry & hostile to them if I do. Ikpuk offered this morning to have some of my 'white man's' food brought up from the coast, or for us to go down to get it, but I told him it was too far — we might perhaps in summer.*

This was the lowest point of Jenness's summer. Soon after, the families moved to a new area which had brush and heather they could burn to cook the food. Supplies of milk and other 'white man's' foods were retrieved from a nearby cache for Jenness. By late August he had recovered much of his strength and soon resumed his share of the duties of hunting and backpacking.

Ikpuk and Jenness returned to Bernard Harbour in November. There he learned about events such as the war in Europe, the few survivors of the *Karluk* and the death from scurvy of one of the expedition crew members. Only one more winter remained for Jenness in the Arctic. He continued to trade for artifacts, took physical anthropology measurements, recorded songs and observed the social interactions of the people. Even as the expedition drew to a close the diary entries continued to record his notes, his thoughts and his activities.

The southern party of the Canadian Arctic Expedition left Bernard Harbour on 13 July 1916. They sailed uneventfully to Herschel Island and then to Cape Smyth. The diaries end as they began, with a comment about the weather. 'The wind had dropped a good deal, so after breakfast we hoisted sail and under combined engine and canvas set off for Nome. About noon the wind died down and the rain fell.' ◆

# Yesterday's Grassland Tomorrow

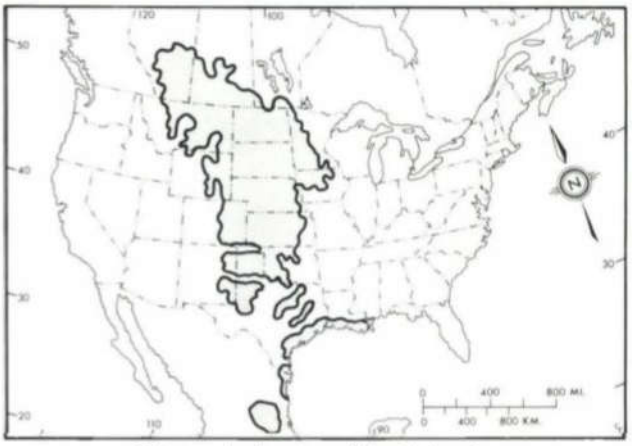
*Photos and Text by Tim Fitzharris*

A FEW CENTURIES AGO most of the interior region of North America was carpeted by a single expanse of wild grassland. This ocean of green stretched some 4,000 kilometres, from central Alberta south almost to Mexico City. Approximately 1,600 kilometres in breadth, it was hemmed in on its eastern edge by the northern spruce forests of Canada and the central hardwood forests of the United States. It ran westward until it encountered the steep walls of the Rocky Mountains. Binding this land in an unbroken sod that covered 2.5 million square kilometres were more than 100 intermixed species of grass. Their richness supported a wildlife population unmatched elsewhere on the continent. It was a beautiful ecosystem, the only one of its kind on the planet.

This treeless region had its origins in the Rocky Mountains. The run-off from melting snow and rain created a network of streams and rivers that rushed down the slopes carrying rich deposits eastward onto the lowlands. This long process continued for thousands of years, the water courses laying down fan-shaped layers of sediment at their mouths. As the rivers changed direction and found new channels, a single fertile plain eventually formed. It sloped gently upward from east to west at the rate of about two metres per kilometre.

The climate that acted on this geologic matrix was affected also to a great degree by the western mountains. On encountering the coastal ranges, the humid air masses blowing in from the Pacific Ocean were forced upward, consequently cooling and losing their moisture. By the time these weather systems rolled down the eastern slopes of the Rockies, they had been wrung dry. The grasslands are mainly the result of this sparse rainfall.

The prairies consisted of three major life zones running in broad north-to-south bands. Their boundaries were somewhat indistinct and shifted periodically due to local influences of fire, grazing by large herbivores and climatic changes. They included the short grass prairies




*The grassland region of North America.*

*Tim Fitzharris of Victoria, B.C., is a free-lance wildlife photographer and author of three books to be published this year: 'The Wild Prairie' and 'The Island' by Oxford University Press, Toronto; and 'The Adventure of Nature Photography' by Hurtig Publishers, Edmonton.*

*Yellow headed blackbird, territorial display.*

*Pink smartweed, a favourite food of many kinds of water birds, borders a slough.*

to the west, the tall grass prairies in the east and in between, a transition zone appropriately named the mixed grass prairies.

Lying in the shadow of the mountains the short grass prairies received the least precipitation of all. So little in fact that some areas with an incomplete ground cover of cacti, sage brush and bunch grasses would actually be considered semi-desert. Most of the region, however, was dominated by grasses of less than knee-height. As elsewhere on the prairies, the vegetation consisted of a great variety of species but blue grama and buffalo grass were most prevalent. Here living conditions were harsh and animals relatively few. Temperatures soared to + 45 °C in summer, and plummeted to – 50 °C during the winter. The wind blew steadily, driving dust and sand before it in blustering whirlwinds. Pronghorn antelope, jack rabbits and coyotes were the most numerous large mammals.

In the eastern tall grass prairie region, precipitation was augmented by weather systems moving in from the Gulf

*Prairie falcon.*

*Ferruginous hawk.*

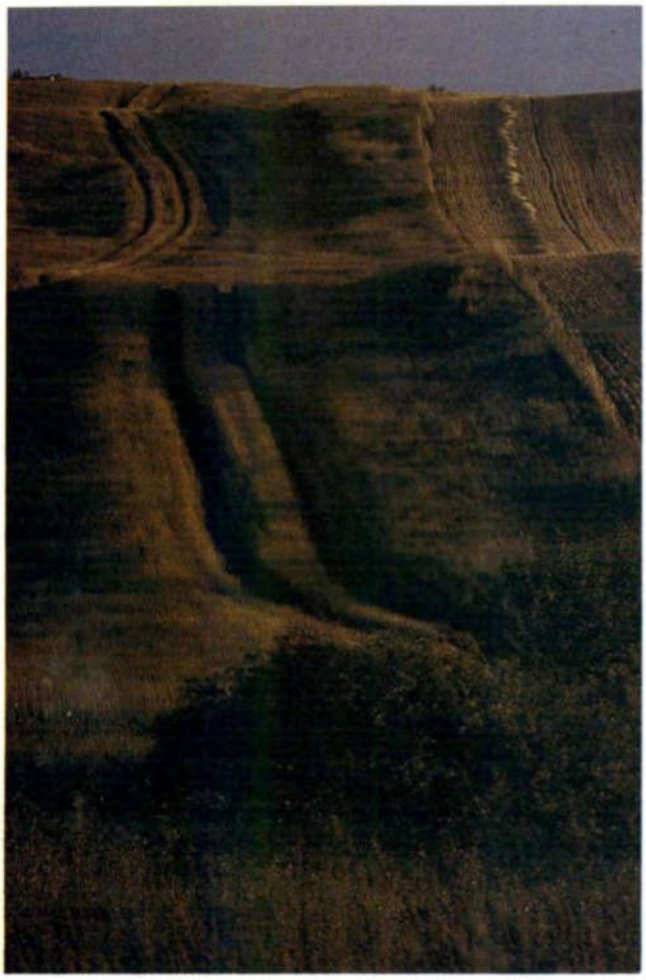
*North American bison cow with calf.*

*Long-billed dowitchers, lesser yellowlegs and marbled godwits pictured in flight above a slough.*

*Burrowing owl.*

*In spring, sage grouse gather on ancestral dancing grounds of the short grass prairies to enact their courtship rituals.*

*Despite extermination programs the resourceful coyote manages to survive.*



*Strips of wild vegetation left undisturbed around the margins of croplands are of great benefit to many types of wildlife.*

*Pronghorn antelope.*

*Sandhill cranes.*

*White-tailed jack rabbit.*

*Badger.*

*A lesser scaup and her ducklings. Nearly three-quarters of all North American waterfowl are bred in the wetlands of the prairies.*

*Despite the changes man has worked on the prairies the region retains, in places, a special aura of spaciousness, wildness and freedom.*

of Mexico and the Great Lakes. Gargantuan grasses resulted. In this lush growth a man on horseback would disappear completely. The vegetation was dominated by a species called big bluestem which developed a root system so dense that five teams of oxen were needed to turn the sod. Here there was ample rain for tree growth but seedlings could not find a foothold among the thick grasses. Furthermore the wildfires of late summer and fall destroyed young trees but were unable to affect the grasses whose deep roots remained untouched, permitting rapid regeneration. Roaming in countless small herds over these lush, rolling vistas were millions of bison.

Between these two zones, one characterized by tall, prolific grasses, the other by a harsh climate and sparse vegetation, lay the mixed grass region. Its plant growth did not exceed waist-height. Little bluestem, needle and thread, and western wheat grass were some of the principal species. Not only here but throughout the prairies there was an abundance of broad-leaved herbs and shrubs, many of which produced brilliant flowers. From early spring until fall, the landscape was enlivened by the various colours of hundreds of species—wild rose, aster, golden rod, sunflower, penstemon, clover, scarlet mallow and prairie anemone to mention only a few typical examples.

These three zones made up an enormous tract of grassland that remained relatively unchanged for thousands of years. It supported wildlife in numbers unimaginable today. Of these creatures the bison justly earned the greatest renown. Sixty-five million of these brutes roamed the prairies. The largest animal in North America, a male bison could weigh as much as ten refrigerators. Incredibly, an almost equal number of pronghorn antelope made their home on the plains. One of the swiftest animals in the world, the pronghorn could sustain an 80-kilometre-per-hour gait for several kilometres. These two species dominated the prairie, but in addition there were myriad elk and mule deer. Relentlessly shadowing these herds of grazers, ready to prey on the weak or injured members, was a host of magnificent carnivores. There were lanky, blond-pelted prairie wolves and massive plains grizzlies. Cougars, bobcats and coyotes were also significant predators; foxes and weasels scavenged the kill remains.

Such huge populations of large mammals were dwarfed nevertheless by staggering numbers of smaller creatures. Hordes of jack rabbits, cottontails, mice, shrews, voles, ground squirrels, gophers, badgers, skunks and raccoons scurried among the grasses, churned up the sod and burrowed into the rich soil. There were astronomical numbers of prairie dogs; thousands of their colonies were scattered over the prairies. One in Texas spread for more than 65,000 square kilometres and contained more than 400,000,000 prairie dogs.

The bird life was no less rich. Bobolinks, pipits, meadowlarks, horned larks and many species of sparrows serenaded the plains from the grasstops. Sage grouse, sharp-tailed grouse and prairie chickens strutted on traditional dancing grounds during the breeding season. Hovering, wheeling and diving above them were hawks, eagles, falcons and vultures. The marshes and potholes were astir with pelicans, cranes, herons, sandpipers, swans, geese and ducks. During the fall and spring the open skies were filled with countless streams of migrating birds of every description.

For many years the unpredictable climate and toughness of the prairie sod resisted the attempts of the white settlers to live on the land. Then the introduction of John Deere's moldboard plough in 1837 opened the entire region to agriculture. Only one per cent of the native tall grass prairie remains today; in its place stands the corn belt. Symmetrical swaths of wheat, barley and rye now wave over most of the mixed grass prairie. Too dry for conventional farming, the short grass plains have largely been converted to fenced rangeland. Thus, the prairies have become an important source of food for man, but the loss of natural habitat has had a devastating effect on the wildlife.

Except for a few small herds kept in parks and game reserves, all the buffalo vanished early in this century. A competitor for livestock forage, the prairie dog was also exterminated from most of its range. The large predators, especially wolves and coyotes, have been largely eradicated, as have many birds of prey, the flying rodent traps of the plains.

Every component of the native ecosystem has suffered as a result of the loss of feeding and breeding habitat. A decline in all manner of creatures—from fairy shrimp and trout to otters and ospreys—has resulted from the disappearance of hundreds of thousands of acres of wetlands, and the pollution of rivers and streams by sewage and toxic industrial wastes.

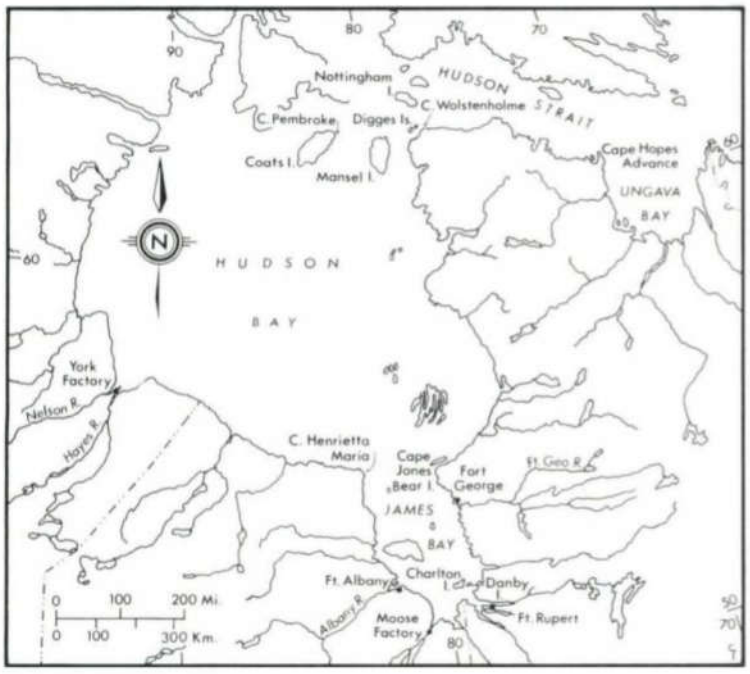
Of the many adverse effects of man on the prairie ecology none are more insidious than those resulting from the widespread application of chemical biocides. Over the years thousands of tons of these weedkillers and pesticides have been spread over the prairies. Absorbed by plants, ingested by animals, and washed into water systems, the toxins show up in all levels of the food chain. The contamination of the prairies will probably never become so calamitous as to provoke concentrated public protest. If the poisoning proceeds, the land will simply grow more and more quiet.

Despite the changes that man has worked on the prairies, the region retains, in places, a special aura of spaciousness, wildness and freedom. Compared to other settled regions of the country, the prairies are still the best place to see an abundance and variety of wildlife. Vigilance and concern, and support of the people who call the prairies home will be needed to protect this special environment from further harm, and to repair some of the wounds of the past. ◆

# Voyage of the 'DISCOVERY' 1911 (Part II)

## By A.R. Williamson

*The 80-ton H B C steamer 'Mooswa' at York Factory. In 1911 she towed cargo to York Factory from the 'Discovery' anchored nearly ten miles distant.*




SOON AFTER OUR ARRIVAL on 4 August 1911 at York Factory a launch came out to take Captain Ford ashore. On board we spent the rest of the day rigging the cargo gear over the main hatch and making ready to discharge the goods consigned to the post. After work was finished for the day, James Wilson, who at age 34 was the oldest able seaman, was appointed to be night watchman and the rest of the crew, having been on watch-and-watch (four hours on and four off) during the past seven weeks, turned in early for a good night's rest.

Early the next morning the *Mooswa*, a small local steamer brought lighters alongside with a clerk on board to receive the cargo. The first mate now told us off for our various duties: the bosun was to work the gangway, one man to drive the winch, two men to tend the guys and yardarm tackle and the remaining six men to work in the hold, slinging the cargo under the supervision of the second mate, who, armed with a cargo list, was responsible for seeing that only goods destined for York Factory were discharged. Work went on steadily throughout Saturday but the next day, being Sunday, we rested from our stevedoring labours. Discharge was resumed at 6 o'clock on Monday, the *Mooswa* plying to and fro as required, bringing out empty lighters and returning with the loaded ones. Discharge continued until the next day when the last of the cargo went over the side about 11 a.m. We then loaded a small shipment of furs destined for London, battened down the main hatch and sent down the cargo gear. Captain Ford having returned on board at 2:15 p.m., the anchor was weighed and we steamed out of York Road.

The weather was fair and the wind blowing fresh from the westward, so once clear of the shoals we spread our canvas and under steam and sail proceeded eastwards. The next morning, as the wind was blowing fresh and favourable, the engine was stopped to conserve fuel and we proceeded under sail only logging a steady 5 to 6 knots, having a favourable current under the keel. After a spell ashore and with his barque under sail once more, Captain Ford was in good form. At 5 p.m. on Friday, 11 August, we passed Cape Henrietta Maria and he ordered 'Lee fore brace!', as the course was altered to sail south into James Bay. As we hauled the yards round, we were delighted to hear again his cheerful chant; 'Well, the fore yard! Be-e-lay there! Oh Be-e-lay!'

James Bay opened out at the southeast corner of Hudson Bay, its entrance being about 90 miles wide between Cape Henrietta Maria and Cape Jones on the west and east side respectively. The length of the Bay is about 200 miles at its southern end. The shores are generally low and flat and as a number of rivers discharge their waters, the bottom is muddy and the water brackish in contrast to the bright, salt waters of Hudson Bay.

Early the next morning we had advanced about 50 miles into the Bay and at 7 a.m. we passed Bear Island south of which great care is necessary, for the southern area of the Bay is infested with scattered islets, rocks and shoal patches many of which, as a caution on the Admiralty Chart warns, are only approximately charted. At midday therefore the engine was started, the square sails furled and during the following night we proceeded at slow speed, sounding frequently. The following day the weather was fine and clear and we proceeded at half speed once more until at 4 p.m. the trees on Charlton became visible on the horizon. Captain Ford now rang the engine-room telegraph to 'Full Speed' to enable us to clear the extensive area of foul ground off the western end of the island before nightfall. At 8 p.m. we steamed round Lisbon Rock at the southwest end of the dangerous area and then bore up northeasterly until midnight when we anchored in 7 fathoms off Charlton Island, the termination of the outward voyage.

The shores of James Bay are generally low and flat and the coastal waters very shallow; only small, light-draught craft can approach them. It was for this reason that Charlton Island, conveniently situated at the southern end of the James Bay, was, early in the Company's history, established as the central depot where the ships from London could discharge their cargoes and load the furs ferried across from the trading posts on the mainland. Each year when the season's ship was due to arrive from London the district manager of the posts crossed to Charlton Island and took up residence there with his staff to transact all the business involved in receiving the cargo, dispatching it to its various destinations and loading the homeward consignments of furs.

The following morning, Monday, 14 August, a large white flag, finely emblazoned with the arms of the Hudson's Bay Company, was hoisted to the foremast-head and at 6:30 a.m. the anchor was weighed and we steamed towards the one-mile-wide strait between Charlton Island and the smaller Danby Island. As the buildings of the depot came into view the second mate, stationed aft, loosed off several rockets. Thus with banner flying and a salvo of detonations we celebrated our safe arrival.

The entrance to the strait being shallow, we anchored at midday and Mr W. L. Miller came on board. He, with his family, resided permanently on Charlton Island in charge of the depot. Each spring, as soon as the ice had

***Captain Williamson, now 91 and living in Sussex, England, describes activities at Charlton Island in the late summer of 1911, and the stormy return voyage out of Hudson Bay.***

disappeared, he sounded the bar and, assisted by some Eskimos who lived on the island, he laid temporary buoys to mark the deep-water channel. At high water, the anchor was weighed and we crossed the bar, sounding continually, with Mr Miller acting as pilot, and at 4:30 p.m. the *Discovery* was anchored in 10 fathoms off the Charlton Island dock. It was not a very extensive establishment, being merely a trans-shipment depot and not a regular trading establishment. At the western end was a wooden house with flagstaff beside it — the residence of Mr Miller and his family. A short distance away was a bunkhouse and beyond that was situated the central feature—a large cargo shed. Adjacent to the shed was a group of wooden buildings—the temporary summer residence and office of the district manager. Further east, on the outskirts of the woods, stood a group of huts where a few Eskimo families lived with their dogs.

When we arrived we were surprised to see a steamer moored off the end of a small pier which provided access to the shed. This, to us, unexpected visitor was the S. S. *Beothic,* not a regular cargo steamer but a sealing vessel, registered and owned in St John's, Newfoundland. We learned that she had been chartered by the Hudson's Bay Company to carry a cargo of stores and equipment from Montreal to York Factory and Charlton Island. She had left York Factory just before we arrived and had reached Charlton Island on 8 August. Her carrying capacity was considerably larger than that of the *Discovery* and the rate of discharge at the island being slow we had to remain at anchor for a week waiting for the steamer to finish unloading and clear the berth.

During the waiting period we were busily employed. Sails and rigging were overhauled and all defects made good. Lifeboat drill and mustering of gear in the boats was carried out and recorded as required by the Merchant Shipping Acts. The cargo gear was then rigged and we were ready to commence discharge when, early on Tuesday, 22 August, the *Beothic* unmoored, cleared the berth and sailed. During the forenoon, however, an onshore wind strengthened and Captain Ford decided it would be too risky to attempt to berth the barque off the pier that day. This pier was a somewhat flimsy affair of angle-iron framing with wood planking bolted on top exten-

ding far enough out from the beach for a vessel moored off the pier end to lay afloat in about 18 feet of water at low tide. A pair of rails bolted on the planking enabled a hand trolley to be used to transport goods between ship and cargo shed. As James Bay is largely frozen over from October to June this contraption had to be dismantled after the ship sailed and re-erected before her arrival the next summer. Mooring off the end of this temporary pier was therefore a manoeuvre which demanded care and precise judgement.

On Wednesday, the weather was fine, the wind light, and at 1:30 p.m. the anchor was weighed and the barque moved towards the pier, ranged up ahead of it and the port anchor was let go a good distance from the pier end. Cable was then paid out as the tide carried the vessel astern until a buoy attached to a stern mooring could be picked up over the port quarter and the mooring hove in. The anchor cable was then hove in and the stern mooring paid out until the end of the pier was abreast of the main hatch. Mooring wires were then run ashore and made fast to permanent holdfasts and the barque was breasted bodily in until she was within a foot or two of the end of the pier. The operation was carried out successfully and by the end of the day the *Discovery* was securely moored in position to commence discharging cargo. More than two months had elapsed since our departure from London and after the evening meal we hurried over the gangway to set foot on dry land for the first time since leaving England. It was a beautiful evening and we enjoyed to the full our stroll in the virgin woods and the sense of freedom from the narrow confines of shipboard life. During our return we visited the bunkhouse to make the acquaintance of the dozen stevedores who had accompanied the district manager from Albany, whose job it was to handle the discharged cargo.

At 5:30 the next morning we were roused out by James Wilson who had resumed the duties of night watchman on our arrival at Charlton Island. After the usual trip to the galley door for a mug of coffee, the bosun ordered us to turn to. The main hatches were removed and we took up the same stevedoring duties we had performed at York Factory. The shore gang pushed the trolley to the end of the pier, a sling of cargo was hooked on in the hold, hove up, swung over the side and discharging was under way. On each case and package was stencilled the name of the post to which it was consigned: Rupert's House, Moose River, Fort Albany, or Fort George. When the trolley reached the shed it was off-loaded, the cases sorted out and stacked in the space allotted to the post for which they were destined, while the trolley was pushed back to the pier end for the next load. The rate of discharge was not rapid but the lads ashore worked with a will and the trolley trundled to and fro all day with only breaks for meals.

During that first afternoon, discharge into the shed was interrupted by the arrival alongside of the *Inenew*. This was a self-propelled barge, 90 feet in length with one hold of about 100 tons capacity and fitted with a steam engine aft. Built in Toronto in 1902 for service in the Bay and being broad of beam and shallow draught, this craft was employed to convey goods from Charlton Island to the various posts and return with the furs destined for London. After she was moored on our offside, the hold party, under the direction of the second mate, sorted out cases and packages marked 'Fort Albany' which were then hoisted out and lowered into the *Inenew* where they were stowed by a party detached from the shed. At 3 p.m. the next day, Friday, the *Inenew*, being fully loaded, cast off to proceed to Fort Albany and we resumed discharging into the shed.

On Sunday, the hatch remained closed and after sweeping the decks we were free of duty, for it was our rest day. Sunday, the sailor's 'dhobie' day, we washed our clothes during the forenoon and after the midday meal we set out to explore the island in our vicinity. It was a fine summer day—sunny and warm—and we were surprised to find that, although the island is frozen over for such a long period each year, during the short summer season a profusion of wild fruits grow and ripen in the woods. But every Eden has its serpent and the Charlton Island woods have in the marshy areas their mosquitoes to whom fresh-blooded mariners were as manna. As we gathered wild strawberries, red currants and blueberries, the insects rose in clouds to feast on us.

We resumed work the next morning, Monday, 28 August, until 11 a.m. when the last sling of general cargo was hoisted out of the hold, lowered on the trolley and trundled into the shed; but discharging work was not finished. Under the general cargo there was a consignment of about 300 tons of coal in the bottom of the hold. Therefore as soon as the last of the case goods had gone over the side, we cleared away all the planks and cargo mats on which the general cargo had been loaded and hoisted all this dunnage into the 'tween-decks. We then commenced transferring coal from the lower hold into the ship's bunkers — work which kept us busy for the rest of the day and until 11:30 the next morning when the bunkers were filled to their utmost capacity of about 55 tons. We then commenced to shovel coal into large baskets to be hoisted out, landed on the trolley and pushed ashore to augment the coal dump from which *Inenew* and the posts drew their supplies of fuel.

As we ceased work that evening the *Inenew* returned and moored alongside to discharge furs from Fort Albany and load goods consigned to Moose River. As all the general cargo was now stored in the shed those goods had to be transported across the *Discovery* using her winch and cargo gear. While this was in progress, work in the hold had to be suspended; the first mate

*The Charlton Island Depot of the H B C, c.1911. The main building, with rails leading from the end of the pier, was the cargo shed, and beside it was the fur warehouse. The flat-roofed buildings were temporary summer quarters for the district manager and his staff.*

therefore decreed that the hold party should spend the next day 'watering ship'.

There being no water works ashore to supply water through a pipe, we had to revert to the days of our seafaring ancestors when a ship requiring fresh water sent boatloads of barrels ashore to be filled from a suitable stream. This evolution, with minor improvements, was the one which the six mariners of the hold party proceeded to carry out, under the direction of the second mate, when we turned to at 6 a.m. the following day. First we loaded the hand-force pump, suction and delivery hoses into the working boat — a four-oared gig — and then rowed to a large double-ended scow containing a fresh-water tank which was moored off the beach. Two men transferred themselves to the scow which was unmoored and taken in tow by the gig and the procession started off with the second mate at the gig's tiller, and the chaps in the scow assisting progress by using a pair of long sweeps. It was a beautiful morning and we voted that rowing in the pure morning air was much to be preferred to shovelling coal in the hold. Having arrived off the watering place — a fine stream issuing from the woods about one mile from the ship — the scow was moored by grapnels far enough out to ensure that she would be afloat at low water. The gig was then rowed to the beach where the pump and hoses were landed and the pump set up where the stream issued from the wood. The suction hose, with strum box covered with bunting to act as filter, was lowered into the stream and the delivery hoses were run out to the tank. As breakfast time was now approaching we walked back to the ship for our meal, strolling back afterwards to commence pumping. The pump was a two-handled affair, so we divided ourselves into three watches of two men each and with Mr Hayward keeping the time, each watch pumped for 15 minutes and was then relieved. It was an idyllic spot, the day was fine and watering ship proved to be a very pleasant occupation. Working the pump was not an arduous task and when not pumping we lay in the sun on the beach or strolled in the woods picking berries until the second mate's whistle summoned the next pair to man the pump handles. We tried bathing, but once only, for the water was freezing cold. Soon after midday the tank was nearly full so we walked back for our dinners, returning to top up the tank, unrig and load pump and hoses into the gig, unmoor the barge and tow it back to the ship. Here the pump was rigged on deck and by evening the water had been transferred into the tanks on board. The scow was then towed astern and moored until required for the next watering day.

Early the next morning the *Inenew* sailed for Moose Factory and we resumed discharging coal ashore until Sunday, 3 September, when, after the routine sweeping of the decks, the rest of the day was free of duties. After doing our laundry we strolled in the woods to gather wild fruits, paid a visit to our friends in the bunkhouse and

walked as far as the Eskimo huts. They were shy folk and usually slammed the doors shut if they saw us approaching. We had, however, become friendly with a couple of the older men who allowed us on a few occasions to enter their homes and see their household arrangements. Of great interest to us were the couple of dozen handsome dogs which roamed about the vicinity. Our friends explained that they only kept them kennelled during the winter months when they were used for sledging trips to other islands and the mainland. During that period the huskies were fed on fish and seal meat but when the snows disappeared they were turned out to forage for themselves. We did not discover what food they found in the woods but were intrigued by the fact that when the tide was running out the whole pack would appear at about half ebb and wading in would follow the tide down to low water busily searching among the small shingle for something edible, possibly small fish or crustacea. When the flood came in they vanished into the woods until the next half ebb, causing us to wonder by what means they timed their return so accurately.

Beyond the native huts was another object of interest — the remains of the stranded Barque *Stork*. After the loss of the Barque *Lady Head* on the Gasket Shoal, about 30 miles north of Charlton Island in 1903, Captain Ford had commanded the *Stork* until 1905 when he was relieved to take command of the *Discovery*. Three years later, when homeward bound the *Stork* had to return, badly damaged, to Charlton Island where she was run ashore and abandoned on 11 October 1908. We found the derelict vessel beached in a small inlet with her masts still standing but the running rigging had been stripped to a gantline. The lower yards were still crossed but were cockbilled at all angles with fore and main brace pennants and blocks still dangling from the yard-arms. In the vicinity we came across a building which had been constructed to house the crew of any ship forced to winter at Charlton Island. It consisted of a large, single-storey house, well constructed of logs and fitted with round glass ports as fitted in ships. The crew of the *Stork* must have been, at that time, the previous occupants.

At 10 a.m. on Monday, discharge of the outward cargo was completed when the last basketful of coal was hove up and landed on the trolley. We now armed ourselves with brooms and brushes and swept the hold clean fore and aft while the carpenter, assisted by the bosun and a couple of hands, erected a fore and aft bulkhead of planks down the centre of the hold. The homeward cargo being a very light one, consisting solely of bales of furs, it was necessary to ballast the barque with shingle from the beach loaded into the lower hold, and the midship bulkhead was vitally necessary to prevent the ballast from shooting bodily down to leeward when she rolled. Late in the afternoon the *Inenew* moored alongside and commenced loading across the *Discovery*.

*The 'Discovery' at Charlton Island and on the right, the 'Inenew'.*

While the barge was being loaded the next day the second mate mustered his watering party with pump and hoses and towing the scow we rowed away to spend another pleasant day filling the tank with fresh water. As we returned the *Inenew* unmoored and sailed.

The next morning, the cargo workers ashore commenced filling tubs with shingle and sand dug from the beach; these were trundled to the pier end, hoisted aboard and dumped into the hold. As the heap built up in the square of the hatch the hold party, armed with shovels, trimmed and levelled the ballast — back-breaking work from which we had a respite the next morning when the second mate collected his watering party and gear to fetch another load of water. When we returned in the late afternoon we had enough to fill all the tanks on board.

Ballast necessary for the homeward run had been found by experience to be about 175 tons and by mid-afternoon on Friday, Mr Redfearn calculated that this amount had been loaded and trimmed. The work was stopped, the 'tween-deck hatches shipped in place and the 'tween-decks swept fore and aft. Dunnage planks were then placed over the whole of the 'tween-deck before we ceased work for the day.

On Saturday, 9 September, the first bales of furs were transported down the pier, hoisted on board and stowed in the 'tween-deck. Loading went on steadily until by late afternoon the last of the valuable consignment was on board, carefully stowed, dunnaged, covered with cargo matting and spare sails. The main hatches were placed in position, tarpaulins spread and battened down and hatch bars fitted and locked. Finally the cargo gear was unrigged, sent down, stowed in the fore peak and the *Discovery* was loaded for London, her draft being 12'7" forward, 16'7" aft. Four feet by the stern was not ideal trim but with engines and full bunkers aft and only a light cargo in the hold forward she was bound to have her stern well down.

The following day was Sunday and after clearing and sweeping the decks we were free to devote our time to our personal affairs. The homeward passage was bound to be rough, wild and boisterous, so we spent several hours washing, mending and overhauling our stormy-weather gear. Steam had been ordered to be raised by daylight the next morning; therefore this would be our last opportunity to walk on dry land before we reached London. After the evening meal most of the crew wandered off for a stroll through the woods. My watch-mate, Mr Clifford, and I walked along the beach to exchange farewell grins with the Eskimos and beyond their huts we found a canoe made fast in a small creek and we decided to borrow it for a trip across the sound. Clifford took the bow paddle, I handled the after one and having cleared the creek we soon crossed the mile-wide strait and landed on the small wooded and uninhabited Danby Island. We walked across the island to the east side and looked across the water to the opposite shore, distant about 15 miles. It is possible that it was in those waters in 1611, exactly 300 years before our visit, that the crew of the first *Discovery* had mutinied and cast Henry Hudson and a few faithful men adrift in the ship's shallop. It is possible also, that the castaways landed on the island on which we stood. It was named Danby by Captain James 20 years later.

The light was beginning to fade as we strolled back through the woods enjoying the ripe, wild strawberries growing there in profusion. It was a beautiful evening, calm and peaceful, as we embarked in the canoe and dug in our paddles. Midway across the strait, without a word being said, we ceased paddling, drew the paddles across our knees and sat quietly, breathing in the pure, unpolluted air and admiring the scene which we would never forget. Ahead of us the black hull of our ship was becoming indistinguishable from the dark woods behind while above the trees the masts, yards and rigging were sharply etched against the pearly light of the sky now fast fading into the darkness of the coming night. As we sat and gazed a flickering light appeared ahead which soon turned into a blaze and as we resumed paddling the sound of singing came across the waters. Having reached the shore and securely moored the canoe we walked along the beach to join our shipmates and the stevedores who, having lit a camp fire, were spending a farewell evening of yarning and singing. Our Welsh shipmate, Taffy Jones, possessed a good voice and at our request he gave us 'Rio Grande', 'Spanish Ladies', 'Rolling Home' and other favourite capstan and topsail halliard shanties to which we roared out the choruses. In return the Canadians sang some of the haunting songs of the voyageurs. When the fire died down it was carefully extinguished and we walked back to the pier where the stevedores bade us farewell before they returned to the bunkhouse.

Monday, 11 September, opened fair with light southwest wind and at 6 a.m. we went to unmooring stations. The gangway was landed and the shore moorings cast off and hove in. As the *Discovery* swung out to her anchor the stern mooring was buoyed and slipped. The port anchor was then weighed, flukes awash, and with engine moving slow ahead the barque was manoeuvred into mid-stream and anchored in 8 fathoms of water. Throughout the rest of the day we were fully occupied preparing the barque for sea. Gantlines were rove off and the sails which had been sent down for repair, were hoisted aloft and bent to their respective yards; all the running rigging was rove off and carefully checked to ensure that each clewline and buntline was correctly led and secured to its proper belaying pin. All the fore and aft sails were prepared for service and by the evening the *Discovery* was all ship-shape, 'alow and aloft'.

During the day Mr Miller went out in his canoe with a party of Eskimos to sound the bar and to place the buoys to mark the deepest water channel. Captain Ford returned on board during the evening with the despatch box containing all the ship's documents and papers. As high water the next morning would be at 5 a.m. he ordered all hands to be called at 3:45 a.m. and steam to be ready on main engine at 4 a.m. During the night, however, the wind shifted into the northwest quarter and rapidly increased to gale force. By the time the watchman called us the gale was howling down the strait whipping up a nasty choppy sea. Mr Miller arrived on board at 4 a.m. but after a discussion with Captain Ford it was decided to postpone sailing, for it was obvious that once over the bar and clear of the land, the heavy sea would prevent our pilot from returning safely in his canoe. During the day the gale died down to a pleasant breeze and in the evening the orders for calling all hands and for main steam were repeated for the following morning.

The next day opened fine and clear with a moderate breeze. Mr Miller came aboard at 4 a.m., all hands went

to stations for leaving harbour, the wheel was manned, the anchor was weighed and the bar was safely crossed at slow speed. At 5:40 a.m. our pilot left the ship, the engine was set at half speed and the barque was steered southwest to clear the foul ground beyond the end of the island. By 2 p.m. we were round Lisbon Rock and, steering a northerly course, were now homeward bound. As we hauled round we received a reminder that the whole area had been but sketchily surveyed when at 11 a.m. the barque struck a submerged object. She did not lose way and no damage was done and as immediate sounding gave 5 fathoms, the object was probably an uncharted and isolated shoal patch. By evening Charlton Island was out of sight below the southern horizon.

The weather remained fair with moderate northwest winds as we steamed north through James Bay. The following day we passed Bear Island and during the middle of that night we crossed the latitude of Cape Henrietta Maria and entered Hudson Bay. During the next two days the weather remained fair but the wind being northerly we proceeded under steam only. During the morning of 17 September the wind backed westerly and we were able to set all the fore and aft sails.

At noon the entrance to the 60-mile-wide channel between Coats and Mansel Islands was about 100 miles ahead. In order to press on and clear the narrow passages ahead while the fine weather lasted Captain Ford now ordered the main engine to be opened up to full speed and at noon the next day, we were in the middle of the Coats - Mansel Island channel. Now the weather rapidly worsened as the wind shifted round easterly, strengthening as it did so. At 7 p.m. we sighted Cape Pembroke, the northernmost point of Coats Island but by this time a howling easterly gale was blowing and the sea was rising rapidly. No further progress being possible, Captain Ford ordered the helm to be put up and the barque hove to on the port tack with her head to the southward, with fore and afters set and the engine moving slowly to check her leeward drift as much as possible. Throughout Monday night and Tuesday the storm raged with frequent squalls of driving snow; our barque rolled heavily, labouring and straining in the short steep seas. At the height of the storm the main topmast staysail sheet carried away but we managed to haul down the wildly thrashing sail, shackle on a new sheet and hoist the sail anew. Late on Tuesday a sounding of 30 fathoms warned that we were being set towards Mansel Island. Thereupon Captain Ford ordered the helm to be put and with an extra kick from the engine, she paid off and wore round to be hove to, heading northward, on the starboard tack.

Wednesday, 20 September, dawned wild and desolate but during the day the gale began to abate, the blinding snow squalls ceased and at midday the skies cleared long enough for our position to be fixed. We had been driven about 70 miles south into the Bay from the position where we first hove to on Monday evening. After nightfall the wind moderated and the sea subsided. At midnight, therefore, the course was set and the engine opened up to full power to regain the lost ground.

During the forenoon of Thursday we passed Carys Swan Nest, the oddly named southeast point of Coats Island and at 7 p.m. we sighted Cape Pembroke, the northernmost point, which we had last sighted on the previous Monday evening. At this second attempt the favourable weather enabled us to clear the Coats-Mansel Island passage and when Cape Pembroke bore to the north-northwest the course was altered to steer to the eastward towards the 30-mile strait between Cape Wolstenholme and Nottingham Island.

During Thursday night with a moderate southeast wind and sea we made good progress at half speed with the fore and afters set, but as Friday dawned the wind shifted through south to northwest and rapidly increased to gale force with occasional flurries of thick blinding snow. The sea rose rapidly and, once more, the barque was rolling heavily, but this was a fair wind so under bare poles we continued on our course to the eastward at half speed and by noon were within 60 miles of the entrance to the strait. This hard blow was but a short one. During the afternoon the gale subsided and was succeeded by moderate, variable winds with cloudy skies and occasional fog banks, but these pleasant conditions were short-lived.

About midway through the middle watch the wind shifted westerly and rapidly increased once more to storm force bringing squalls of heavy snow. The *Discovery* was now in a hazardous position; the strait was only about 20 miles ahead and the outlying rocks off Digges Island, west of Cape Wolstenholme, were somewhere south of us while the blinding snow made it impossible to ascertain her exact position. She was therefore brought to the wind and hove to on the port tack with her head to the north and westward. The storm raged throughout Saturday with the barque rolling in the high seas, decks constantly awash flooding cabins and galley. At 4 p.m., the gale gave Captain Ford the chance for which he was watching and waiting. As both watches mustered at eight bells a furious snow squall swept over us and as it whistled through the strait to leeward it was followed by a temporary break in the weather and the high land of Cape Wolstenholme was sighted through the murk long enough for a bearing to be taken, the barque's approximate position plotted and the safe course determined.

Steering orders were now shouted to the helmsman, the mates took station at the lee braces and as she paid off before the wind we hauled in the weather braces, squaring the yards until she was steadied on her course. Captain Ford now pushed down the handle of the engine-room telegraph to 'Full Ahead' and shouted 'Loose the

*'As night fell the wind increased with terrific squalls of blinding snow and as there were so many bergs about there was great danger of crashing into one during the dark hours'.*

topsails!' In the bitterly cold weather we hurried aloft to cast off the gaskets. Down on deck again, clewlines and buntlines were cast off and with the port watch at the fore and the starboard watch at the main, the lower topsails were sheeted home, the halliards manned and with rousing shouts of 'Up she rises!' and other seaman-like noises, we hoisted the upper topsail yards. Now, with as much sail set to the gale as she could safely carry and as much engine power as her wooden hull could withstand, the *Discovery* surged and rolled along before the storm winds, her jib-boom end pointing towards the strait, at her utmost speed of 7 to 8 knots.

By noon the next day, Sunday, Cape Wolstenholme was far astern, we had traversed 'Charlie's Patch' and were rolling along in the middle of Hudson Strait before the westerly gale and occasional snow flurries. The pack ice we had encountered on the outward passage had all disappeared but during the day we passed a number of icebergs. As night fell the wind increased with terrific squalls of blinding snow and as there were so many bergs about there was great danger of crashing into one during the dark hours. Sail was therefore reduced, the barque brought round to the wind and the engine stopped to await daylight. The night passed without incident and at daylight the engine was started, more sail set and we resumed our course to the eastward. The strong westerly gale continued throughout, with a high following sea in which our barque rolled and wallowed but she made good progress and in the early afternoon, in a short spell of clear weather, we sighted, away to the southward, Cape Hope's Advance, the northwestern extremity of Ungava Bay. During that day we passed several bergs but although the strong westerlies continued with occasional snow flurries, the conditions during the following night were fine and clear with good visibility so we continued on our course to the eastward with extra lookouts posted.

From dawn the next day, 26 September, the wind moderated steadily, the sea subsided and the weather turned sunny, bright and clear to give us the finest day we had enjoyed since leaving Charlton Island. As well as carrying out repairs aloft we took the opportunity of opening the small fore hatch and inspecting the 'tween-deck cargo of furs. It was found that the heavy rolling and straining had caused some of the bales to break adrift and that others had been wetted by water leaking through deck seams which had opened up under the pounding of heavy seas crashing on deck. The bales were, however, made up with stout sealskin coverings which were probably impervious to water penetration. The displaced bales were re-stowed, chocked off and the hatch covers replaced and battened down. During the day we passed a number of icebergs obviously being swept into the strait by the indraught from the Labrador Current. Throughout the day we made steady progress to the eastward and at 4 p.m. the southern point of Resolution Island was in sight bearing northeast. At 6 p.m. the island was abaft the beam and we were out clear of Hudson Strait, steering southeast into Davis Strait. Extreme caution was now necessary. The icebergs seen in the vicinity of Resolution Island could only be a part of the number drifting south in the main current, and there was risk of collision with an unseen berg during the dark hours until we had traversed the Labrador Current. During the night therefore the engine was stopped, sail reduced and we drifted south with the current until the next morning when the engine was started at half speed and the square sails were furled.

The following day passed without incident and by Thursday morning, 28 September, we were to the eastward of the current and in fine, clear weather were bowling along under sail and steam. On the outward passage we sailed north about the British Isles but the route homeward was to be south about; therefore once out clear our course was southeasterly steering for the western entrance to the English Channel. Our sentiments were those of Robbie Burns when he wrote: 'Of a' the airts the wind can blaw, I dearly like the west'; but at the outset we were to be disappointed. During the afternoon of that same day the weather began to change and the west wind became light and variable. In the evening it shifted to the southeast and rapidly increased to gale force with overcast skies and rain squalls. The wind was now in our teeth — a dead-muzzler — and the *Discovery* was no clipper ship. She was quite unable to beat to windward. By the morning of Friday, 29 September, she was under reduced canvas, close hauled on the starboard tack, rolling and labouring in a high, confused sea with an oil bag streamed from the starboard bow to break the force of the heavy seas before they reared up over the bulwarks and crashed on board. We were now in an awkward predicament, for the closest she would lay to the wind was about E.N.E. and although the engine was kept turning ahead to check her drift, she was being steadily driven to leeward north into Davis Strait. Also with her head towards the northeast she was being set across the strait towards the north-going West Greenland Current in which we would be carried by wind and current towards the Polar Sea — a direction in which we definitely did not desire to go. Therefore at 6 a.m. we wore ship round to the port tack heading westward. The noon position that day placed us

in latitude 63° North, 100 miles north of Resolution Island and nearly 200 miles north of Cape Farewell, the entrance to the Davis Strait.

During the next two days the weather was fine but the winds being variable the watches were kept busy trimming the yards to every shift of wind. All the sail that she could carry was set but in the light and moderate winds, although the engine was in use, our barque made but slow progress southward.

The early part of Wednesday, 4 October, was fair and opportunity was taken to open the fore hatch and inspect the 'tween-deck cargo. All was found to be secure and in good order but as we battened down the hatch the wind was increasing and shifting to eastward once more. Sail was reduced as the wind rose to a strong gale which lasted throughout the night. Our barque rolled and wallowed in a heavy, confused sea and shipped water fore and aft in the violent squalls which swept over her.

As Thursday dawned the wind died away and then shifted to the northwest — the fair wind we were hoping for. All sail was rapidly set to the favouring breeze and with the engine going at half speed the *Discovery* was soon reeling off an average 6 knots on a southeasterly course heading for the channel. By the evening of that day we were out of the Davis Strait and well south of the latitude of Cape Farewell; but once again the winds proved fickle. The fine fair breezes backed to southeast and increased to a brisk gale with rain squalls before nightfall on Friday, 6 October.

These adverse conditions prevailed during the following two days. Twice we wore ship but were being set northwestward until Monday, 9 October, when the strong winds died down and shifted round to the westward and the clouds cleared to give us a fine clear day. All sail was made once more and steering towards the channel our barque made, for her, good progress. The day's run from noon on the 9th to noon the next day was 130 miles.

A fortnight had now elapsed since Resolution Island was abeam when we sailed out of the Hudson Strait and during those two weeks we had only traversed about one third of our course across the North Atlantic. Therefore unless the winds and weather ahead were more favourable we could not expect to reach the Channel for another three weeks at the very least. Under sail on the wide ocean with a thousand miles of sea-room the slow speed of the *Discovery* and her inability to beat to windward were not of vital importance, but negotiating the tides and traffic in the English Channel without the assistance of the engine could be difficult if the winds were contrary, or impossible if they failed altogether. It was imperative that when we arrived in Soundings sufficient coal should remain in the bunkers for the 'run in' and Captain Ford and the chief engineer now had to consider this problem. By the evening of 12 October our captain had finished his sums and made his decision. In the approximate position of 56 °N. 42 °W. he gave the order to crowd on all sail, to stop the engine and draw the boiler fires. On deck we hurried aloft to loose all sails still furled and when they were hoisted and sheeted home and the yards correctly trimmed, our barque was again a windjammer dependent on the winds alone for her progress.

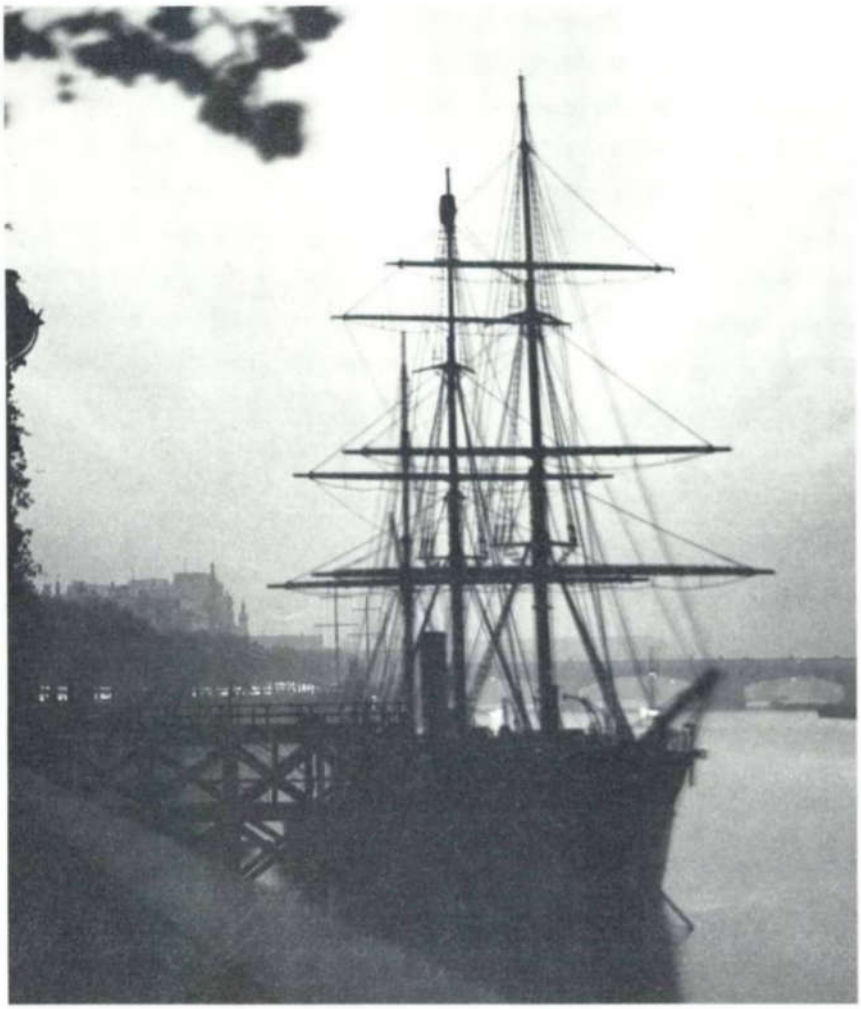
We were, however, only able to carry full sail until the evening of that day, Friday, 13 October, for as night fell the wind shifted to S.S.W. and increased in strength until by next morning a hard gale was roaring over us and our barque, close-hauled on the starboard tack under shortened sail, was rolling, labouring, groaning and creaking in the high, rough seas with oil bags streamed and decks constantly awash. These conditions prevailed until Sunday, when, as the wind shifted westerly and moderated, we shook the reefs out of the topsails and spread all our canvas to the fine, fair breezes.

After this latest gale the weather became settled for a few days during which the winds were light to moderate and with the jib-boom pointing towards our next landfall, the *Discovery* glided along over sparkling seas beneath clear, sunny skies. The rolling having ceased and the decks being dry once more, we were able to discard oilskins and seaboots as we went cheerfully about our duties; but the most cheerful man on board was, undoubtedly, Captain John Ford. As master of his ship he alone carried responsibility for the navigation and safety of ship, cargo and everyone on board. All the difficulties and hazards of a Hudson Bay voyage were now far astern and with his barque homeward bound, under sail with a thousand miles of sea-room, our captain was in a buoyant mood as he paced the bridge glancing aloft at every turn to note the trim of the yards and the sails straining at their sheets.

When we left Charlton Island the *Discovery* was floating four feet by the stern but, as much of the coal in the bunkers had since gone up the funnel in smoke or over the side as ashes, the weight aft had been reduced and her stern had risen about three feet to the advantage of her sailing qualities. This improvement became apparent when on Friday, 20 October, the wind shifted to northwest and increased to a brisk gale before which our barque scudded along under full sail, logging 6 to 7 knots, reaching 8 in the squalls. At noon on Wednesday the distance run during the previous 24 hours was 174 miles, an average speed of 7¼ knots, which was the best day's run, under sail, recorded during the voyage.

At that time we were approaching our landfall, steam was being raised and at 2 p.m. the main engine was started at half speed. The westerly winds continuing to blow fresh to strong, the topgallant sails and the mainsail were furled and we sailed into the channel with every other sail set and drawing taut full to assist the engine.

It was 1:40 a.m. the next day when the officer of the



*The 'Discovery' at her mooring in King's Reach on the Thames. She is being restored to her 1925 state by The Maritime Trust, a private organization whose aim is to maintain Britain's maritime heritage through the preservation of certain historic ships.*

*The National Maritime Museum, Greenwich, is advising on the Discovery's reconstruction and is mounting displays in the holds illustrating the ship's three Antarctic expeditions (from Captain Scott to Sir Douglas Mawson) as well as her voyages under the ownership (1905-1923) of the Hudson's Bay Company. Contributions to the project are welcomed by the Maritime Trust at 16 Ebury Street, London* SW1W 0LH

watch sighted on the northern horizon the loom of a flashing light—two quick flashes every 15 seconds. It was the light on the Bishop Rock, the western extremity of the Scilly Isles and the northwestern entrance to the English Channel.

The remainder of the voyage was uneventful. At 7 p.m. the same day Start Point was abeam and when day dawned on Friday, Portland Bill was astern and we were steering towards St Catherine's Isle of Wight. At 5:30 a.m. Captain Ford ordered 'Full Speed' and all the square sails to be furled. As they would not be set again that voyage we gave them the traditional smooth 'harbour stow' and when I descended the main rigging I had furled a square sail for the last time in my sea-going career. All the fore and aft sails remained set until the next day when they were hauled down and stowed as we approached Dungeness where, in response to our signal, a Thames pilot came on board at midday.

During that evening we passed the South Foreland and at 10 p.m. the North Foreland was abeam. Thence we steamed eastwards into the Thames Estuary, passing the Nore Light Vessel at 2:30 a.m. At 6 o'clock on a fine sabbath morning we were back in the River Thames anchored off Gravesend to change pilots and await the incoming flood tide. After breakfast in the forecastle we commenced to pack our sea-bags and then carried out the end-of-the-voyage ritual of throwing our 'donkey's breakfasts' overboard.

When the flood tide commenced running at 11:30 a.m. the anchor was weighed and we steamed up river, bracing the yards sharp up ready for entering the dock. An anchor was let go off the entrance to the West India Dock at 2:15 p.m. to await high water which occurred one hour later. The dock gates having been opened the anchor was weighed and stowed, our barque steamed into the dock and proceeded to her allotted berth. At 4:30 p.m. on Sunday, 29 October, mooring was completed. 'Finished with engines' was rung on the engine-room telegraph on the bridge and the 1911 voyage of the *Discovery* was over. ◆

*Many rare and valuable books are deteriorating today because of high acid content in the paper. Charles Brandt describes the conservation process of Volume I of . . .*

# Audubon's 'Birds of America'

By Charles A.E. Brandt

ON 2 APRIL 1852, the Library Committee of the Legislative Library at Fredericton, New Brunswick, authorized the purchase of the four volumes of Audubon's *Birds of America* from Little, Brown & Co. of Boston, Massachusetts, at a cost of $800. It is one of five sets of Audubon's ornithology in Canada, and is one of the most handsomely bound of all the existing Audubon folios in the world. The purchase of these rare and impressive volumes was a wise investment. The value of such a set of four volumes was recently set at $1½ million in a Sotheby auction to be held in New York.

Approximately 200 sets, consisting of 435 prints each, of the Audubon works were printed; 134 sets are known to exist. Some sets were broken up and sold as single prints, and ten are known to have been destroyed by fire and war. According to Waldemar H. Fries, a specialist in Audubon prints, there are probably 70,000 prints from the original edition still in existence.

John James Audubon (1785-1851) published the double elephant folio edition of *Birds of America* between the years 1827 and 1838. He had previously travelled through North America studying, drawing and painting the birds in their natural environment in life-size and life-like poses. In 1826 he went to Scotland and England to arrange for the publication of his drawings. William Home Lizars, a prominent engraver in Edinburgh, executed the first ten copper-plate engravings, printed them and directed his water-colourists in their hand-colouring. The remaining 425 plates were executed, printed and coloured by R. Havell and Son, London.

In 1978-79 I treated, for conservation purposes, the 109 prints of Volume I of the four volumes owned by the New Brunswick Legislative Library. The work continued over a period of four months and was done at the Atlantic Conservation Centre at Moncton. I was assisted there by a colleague, Robert M. McCarroll.

One of the main conservation problems facing library and archival collections today is that of acid paper. The period of good durable paper was from the twelfth to the nineteenth century. (I have examined paper from the thirteenth century in Germany, and found it to be in almost perfect condition.) In the late seventeenth century, alum (which breaks down to form acid) was introduced into the making of paper to harden the sizing. Over time, acidity in paper decreases the strength of the fibre, so that it becomes weak and brittle and is finally reduced to a powder.

The Audubon plates were printed on J. Whatman handmade wove paper. This is a heavy paper, about 10 mils, and each sheet is water-marked with either 'J. Whatman' or 'T. J. Whatman Turkey Mill', plus the date, which ranges from 1825 to 1838. The major conservation problems stemmed from the chemical nature of the wove Whatman paper. Spot testing indicated a high content of alum, which would have contributed to the high acidity of the paper.

Another important physical feature of the book leaves is that the grain of the paper runs horizontally instead

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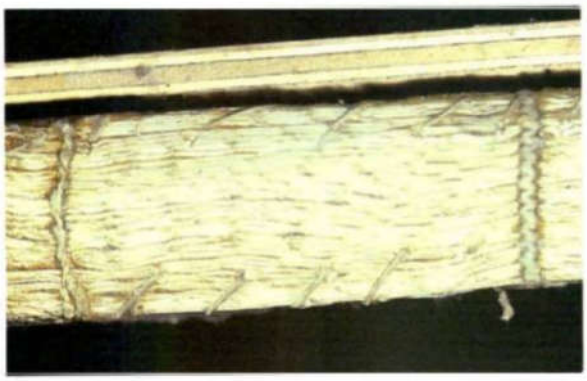
*The Reverend Charles Brandt is Chief Conservator, Artistic and Historic Works on Paper, Provincial Archives of Manitoba, Winnipeg.*

*Photographs are by the author.*

*A detail of the gold tooling done in the 1850s and still in an excellent state of preservation.*

*A complication with Volume I was caused by the horizontal grain of the paper. The leaves failed to arch, and tended to break along the gutter.*



*Detail of the sewing structure. Whip-stitching prevented leaves opening to the gutter.*

of vertically. As a consequence of this wrong-grain direction, the leaves do not open properly; that is, they fail to arch as each leaf is turned from right to left, and instead tend to break along the binding gutter as pressure is applied. Also, the method of whip-stitching individual prints into sections of four leaves prevents their opening flat to the inside gutter. This type of sewing, plus the wrong-grain direction, had resulted in the breakage of many of the leaves as they were forced open, especially at the front and back of the book. An additional problem was that the volume had been lined along the edges of the reverse side of each leaf with linen tape. In some instances the image had transferred to the back of the preceding leaf; this was especially noticeable in the large dark-coloured images. It was not clear whether this transfer was due to acid migration or to actual pigment-colour transfer. The colours of the image areas, however, had retained their freshness and brilliance.

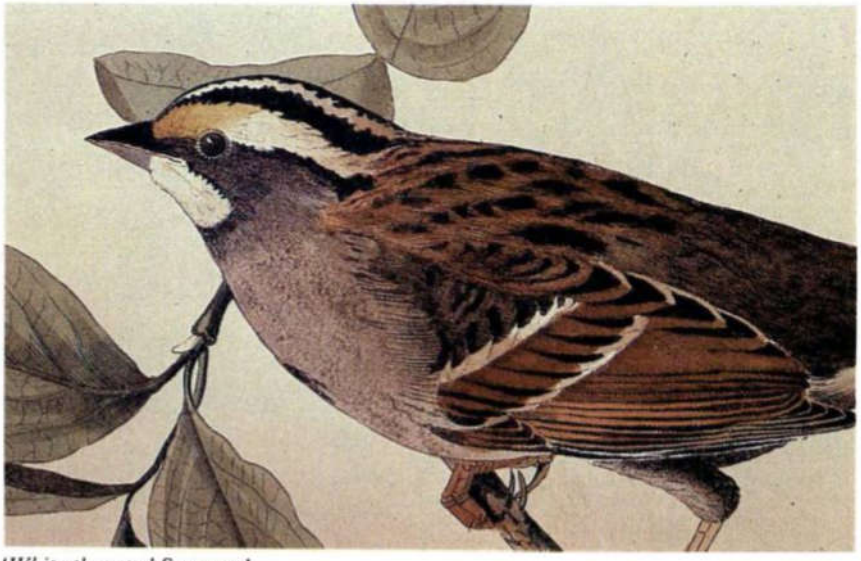
Although there was some slight fading of the front board, the leather was in exceptionally good condition. The gold tooling was exquisitely done by J. Wright, a prominent London binder of the 1850s, and remained in an excellent state of preservation with little flaking and with exceptional brilliance.

My task was primarily to remove the acid from the prints with the utmost care and to store them in such a way as to prevent further deterioration.

After the photographic documentation of the binding and of each individual print was completed, the book-block was removed from its binding. The backbone of the bookblock was heavily lined with cartridge paper. This I gradually removed by applying coats of wheat-starch paste which slowly softened the paper and old adhesive. Eventually the hardened animal glue of the backbone was gently removed with a bone folder. The removal of the glue and cartridge paper revealed the sewing of the bookblock; groups of four leaves had been whip-stitched to form a signature. Each signature was then sewn around sunken cords. The first group of about five signatures and the last group had been oversewn to strengthen these areas of the bookblock. There were no slips to lace into the boards. The binding was, in fact, a case-binding. The lack of slips, the whip-stitching which prevented any leaf opening to the gutter, the heavily lined-up backbone, plus the over-sewing constituted weaknesses in the binding structure and had led to a weakening of the physical properties of the book.

The sewing threads were cut with a sharp scalpel and then using a bamboo spatula, each leaf was gently raised and removed one by one from the bookblock. This for the most part was done without any breakage or tearing except for those leaves which were already broken along the gutter (owing to the wrong-grain direction), and for the exceptional leaf where the original animal glue had crept between the signatures when the backbone was glued up.

*'The Ivory-billed Woodpecker'.*



*'White throated Sparrow'.*

*'Marsh Hawk'.*

*Before the prints were washed and deacidified, colours were fixed with a methyl cellulose solution.*

***Individual prints by Audubon are now selling at record prices, the highest figure to date being $45,100 for 'Trumpeter Swan' at a recent Sotheby Parke Bernet auction in New York.***

*Throughout the treatment, prints were supported on a sheet of Reemay, a polyester material. Here, Charles Brandt removes a print from the alkaline solution.*

*Restored turkey print, stored in a Mylar envelope and Solander box.*

Historically, the years 1827 to 1838 when the drawings were first hand-coloured in England, was an interesting period in the development and use of certain pigments. Therefore, it was felt that an analysis would contribute to the knowledge of the history and development of pigments, especially if the analysis could eventually cover the entire period of eleven years. Thirty-eight samples were taken of the pigments used in the colouring of the images; these particles were removed by a sharp scalpel under a microscope, then placed into small glass vials and sent to the Canadian Conservation Institute in Ottawa for analysis.

All of the image colours were tested for their solubility in water. A drop of distilled water was placed on a specific colour, allowed to stand for about thirty seconds and then a small square of blotter was pressed against the moistened area. The blotter surface was then examined to determine whether or not there had been a colour transfer. Forty-three of the 109 prints had one or more colours which were soluble in water. Some colours were highly soluble, others only faintly. In addition, some of the prints had been glazed with a varnish-like substance. These glazed areas were also tested; the water had no effect on them and did not dull them in any way.

Because several of the image colours were soluble in water, it was decided to fix them with 10 per cent solution of methyl cellulose in water. This was evenly applied to the front surface of the image area with a soft-bristled oriental brush and allowed to dry overnight. When dry, the fixed surface had a slight sheen.

As a preliminary to washing, the linen tape was mechanically removed by peeling it off dry. Each Audubon print was then supported on a sheet of 'Reemay', a polyester material; sprayed off with distilled water and then placed in a large sink for washing. The prints were washed in groups of five in constantly changing lukewarm water for forty-five minutes. The washing not only removed additional dirt but also made possible the removal of the residual linen-tape adhesive. The remaining animal glue on the back edge of each plate was softened and could be removed by the use of a bamboo spatula and soft brush. After washing, the prints were removed from the sink, still on their Reemay supports and placed image side up on a terry cloth. The excess moisture of the image was blotted dry with sheets of chromatography paper, and air-dried.

The prints were then deacidified by immersing them in an alkaline solution of magnesium bicarbonate for forty minutes. The prints were deacidified in groups of five, each group in a fresh solution of 25 litres of magnesium bicarbonate solution. These were removed and dried in the same manner as the washed prints. It is to be noted that on drying there was no apparent trace of methyl cellulose on the paper surface, and the glazes were left unaffected.

Prints where there was a possible problem of bleeding of specific colours were deacidified with a non-aqueous deacidification solution, applied to both the front and back of the prints. Before the prints were completely dry, they were placed between blotters and placed in a large press and pressed lightly overnight. The final alkalinity, measured with a flat-headed surface electrode, was within the accepted range. Since the fixative was applied only to the front surface of the image area it is thought that washing occurred from the reverse side and that as well the deacidification solution easily entered the paper from the back side. During the washing and deacidification there was obviously some softening of colours, although no bleeding of colours was detected. During the blotting, with one exception, there was no transfer of colours to the blotting paper.

All mending was done with Japanese oriental paper using wheat-starch paste as an adhesive. The paper was torn into long strips by the use of a water brush to ensure long fibres; a strip was applied to the reverse of the fore-edge of each print. The mending of small tears was done with a tacking iron, which was applied at a low heat to the mend through a sheet of Reemay. Because of the weakness and many tears and losses of the Turkey print it was backed overall with oriental paper.

After consultation with the librarian of the New Brunswick Legislative Library it was decided not to incorporate the 109 prints back into the binding, as the Whatman paper would not withstand turning of the pages without consequent breakage. Instead each print was inserted into a seven mil Mylar envelope; these were then stored in two large Solander boxes which were lined with acid-free paper.

The final procedure was the treatment of the binding. First the paper lining of the boards was removed. The corners of the binding, which showed considerable wear, were lifted and the heavy millboard corners injected with an approved conservation buffered white glue to strengthen the boards. The worn corners were strengthened with new leather which was applied with wheat-starch paste. The spine was reinforced by lifting the leather along the spine and head cap areas and then pasting in a strip of leather which was the same length as the spine but about an inch wider.

Finally, the spine was lined with acid-free paper and new paper applied to the inside of the boards. The leather was treated with a solution of potassium lactate, allowed to dry for 24 hours, and then a lanolin and leather dressing of neat's-foot oil was applied. When this had dried the binding was buffed with soft terry cloth. A special storage box was constructed in which the binding would be stored flat, face up.

The conservation of the prints was now complete; with proper storage, environmental controls and handling, their life span would be considerably lengthened. ◆

*Sooner or later*
*it all comes thronging back*
*everything that ever happened to you:*
*suddenly I find myself singing*
*and I can't sing worth a damn*
*which doesn't matter anyway*
*standing on the stony shoreline*
*of an arctic island watching icebergs*
*drifting in white night of Cumberland Sound*
*like ghost ships of lost explorers*
*trying to find safe passage*
*thru the ice trying to get home*
*And without awareness of doing it*
*I began to hum deep in my throat*
*then burst out singing with voice cracking*
*from fever I'd just recovered from —*
*The actual song-words didn't matter*
*but for a moment I was prehistoric man*
*coming out of his cave at night to howl*
*from sheer self importance*
*because he was a damn good hunter*
*or because a woman had smiled*
*And the song said: Hello my friends*
*Hello my friends because we're friends*
*let's have a drink while we're alive*
*And the song said: Let's have a drink*
*for no reason or any reason*
*and because there's a time in your life*

# Dog Song

*like bacon frying like stars exploding*
*and you stand on your hind legs and sing*
*because you're a dreaming animal*
*trapped in a human body*
*After a while there was a little echo*
*the merest whine and whimper and thread*
*of sound when a sled dog joined me*
*then another and another*
*in solemn sadness with a great undertone*
*of exaltation from weary arctic miles*
*they had all travelled together*
*with balls of ice torturing their feet*
*and whips biting hairy shoulders*
*and starvation meals of frozen fish*
*so hard it was like eating fire*
*they sang the soul's grief of being trapped*
*and knowing it inside an animal's body*
*and the dogs mourned.*

*We stopped and there was silence*
*but not an empty silence*
*Jonahsie and Leah stood in their doorway*
*watching me with a peculiar look*
*And I grinned at them*
*while the great floating ice castles*
*swayed by at the edge of the world—*

*Al Purdy*

*'Dog Song' was inspired by a memory of the poet's 1955 journey to Baffin Island*

# Canoeing on Hudson Bay

By Alan S. Kesselheim

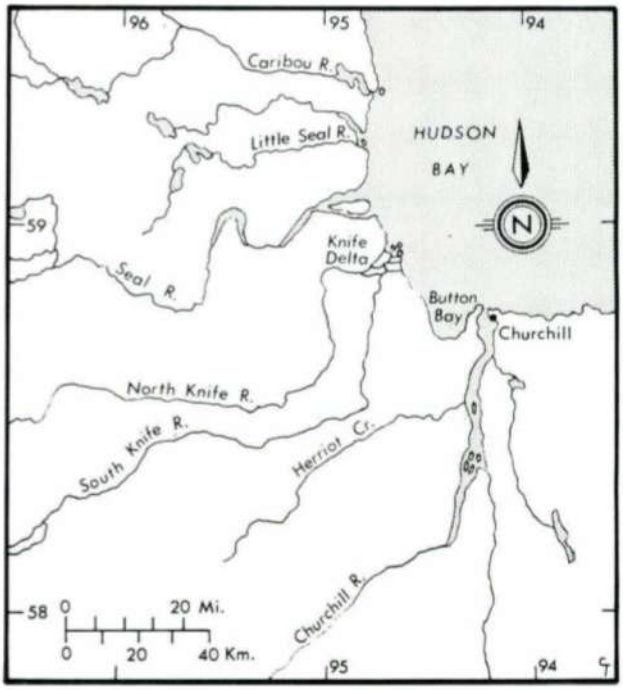
*Alan Kesselheim of Bozeman, Montana, is an outdoor educator and writer.*

I CRANED MY NECK to see if I could glimpse Hudson Bay through the brush on the banks of the Seal River. The smell of salt water was in the air and I knew we were close to the delta.

A sudden shout from the canoe behind us made me look to the riverbank in time to see a large polar bear slip into the water and start swimming towards us. The bear was very quiet. Its massive head lifted clear of the water to sniff in our direction and its powerful shoulders worked easily, propelling the white body through the water. At twenty-five feet, the bear was far too close and we backpaddled towards the upstream shore where we joined the other two canoes in our party.

For some ten minutes, the polar bear patrolled back and forth in front of us, neatly pinning us on shore. It was not aggressive, but curious and clearly unafraid. At the top of the food chain, polar bears have little to fear in their native environment. We, on the other hand, were completely vulnerable. Our only recourse was to make as much noise as we could, hoping to drive the polar bear away, or wait for it to make a move. If the bear attacked, or if another bear appeared, we were in serious trouble.

After a time, the polar bear swam close to one bank of the river and we decided to try to paddle past it. Bunching into a tight formation and hugging the opposite bank, we stroked steadily downstream and away from the bear. It followed slowly and watched us disappear around the



*'By chance, one of us woke . . . and saw that the rapidly encroaching tide was about to put us all under water. The night was dark, illuminated only by eerie green northern lights.'*

*Paddling on a quiet bay during a high-tide sunrise.*

*Curious seals are frequent companions to canoeists who venture into Hudson Bay.*

*Stranded at low tide on Button Bay. In 1981 this bay claimed the lives of four canoeists.*

next river bend. Some time passed before we stopped glancing nervously over our shoulders or allowed any distance to come between the canoes.

It was 29 July 1982. Six of us were nearing the end of a month-long journey which had taken us across the top of northern Manitoba. Our route stretched some 400 miles from Nueltin Lake to Churchill, Manitoba, following the drainage of the North Seal River for much of that distance.

The Seal River is one of many watercourses that drain into Hudson Bay and make for attractive wilderness trips. A number of these rivers, such as the Churchill and Thelon, empty conveniently into the Bay at a town or transportation centre, but others entail travelling some distance across Hudson Bay in order to reach a town.

Perhaps the most crucial logistical question for such an expedition, is whether to risk paddling canoes on the icy ocean waters of Hudson Bay or to be picked up by freight canoe or airplane. To reach a sound decision, the risks and rewards of canoeing on Hudson Bay and the preparations of the expedition party, must be carefully assessed.

We chose to end our trip with a forty-mile paddle along the Hudson Bay coastline from the Seal River delta to Churchill. The prospect of that passage became the focus of anticipation and anxiety throughout the trip. Polar-bear confrontation was only one of the risks that concerned us.

The hazards of Hudson Bay are well documented. Captain Thomas James made the following entry in his journal on 3 September 1631, when his ship was off shore south of Cape Henrietta Maria:

> In the evening, there came a great rolling sea out of the north northeast and, by eight o'clock, a heavy wind out of the southeast. The conflict of the heavy rolling sea from the northeast and the strong wind from the southeast churned up the surface of the water most frightfully . . . the lightning flashed, the wind roared and it rained and snowed all night. Never before was I in such a storm. We shipped many seas, but one which swept us fore and aft was particularly dangerous . . . In this wild distraction of wind and waves, the ship labored terribly, and we had great difficulty in keeping things lashed down in the hold and between the decks.

Frigid water temperatures add menace to the possibility of capsize in rough water. In 1982, the pack ice was not off Hudson Bay before mid-July and the first grain ship had not navigated its way through the ice-strewn waters to Churchill until 1 August. Hypothermia would be life-threatening within minutes of a capsize.

A group of four canoeists from the United States finished their expedition along this same stretch of coastline in 1981. They succumbed to the temptation of short-cuts, deciding to paddle straight across Button Bay to Churchill rather than follow the shoreline. Part way across the open water a storm hit them, raising twelve- and fourteen-foot waves. Three bodies, pieces of broken and battered canoes, some journals, and other odds and ends of trip gear were all that were found of that group. Their judgement error was a fatal one.

Extreme tidal fluctuations present additional dangers for canoeists. The tremendous glacial ice-cap that had its epicentre in the Hudson Bay region left a monotonous topographic legacy, punctuated only infrequently by glacially deposited landforms such as esker ridges, kame knolls, and huge erratic boulders. Most of the shoreline is so flat that in certain lighting the demarcation between water and land is hard to pinpoint.

The gradual downslope continues well into the coastal waters of the Bay. Even several hundred yards from shore, our paddles could strike bottom easily. Low tide exposes a huge expanse of boulders, sand, and mud—tidal flats that often extend three to seven miles from shore.

If canoeists wish to paddle regardless of low or high tide, they must travel a long way from shore. Doing so, they leave themselves exposed in the event of a weather change. Should winds rise while they are paddling some distance from shore, the safety of the group is in serious doubt.

We chose to paddle only at high tide in order to stay near shore. Even at that, we found ourselves vulnerable. Navigating across the Knife River delta, we canoed well out into the Bay to avoid the profusion of boulders lurking just under the surface. Part way along this section, the tide went out, leaving us stranded on the rocky flats. Not knowing precisely how far from shore we were, we settled in, made dinner, and went to sleep on the rocks as night fell.

By chance, one of us woke in the middle of the night and saw that the rapidly encroaching tide was about to put us all under water. The night was dark, illuminated only by eerie green northern lights. We quickly tossed our gear into the canoes and hopped in as the water lifted us off the rocks. For three hours, we bumped and scraped and turned tortuously through a boulder garden until it was light enough to see our way. If there had been a wind or waves, it would have been next to impossible to stay together and resist being smashed on the rocks.

People who live on the Bay look at you a little queerly when you talk to them about canoeing there. They are clearly respectful of the capricious weather and the dangers of Bay travel.

Pilots in Churchill take the risks seriously enough to go out of their way to watch for a group that they know is paddling on or near to the Bay. Several Churchill residents we spoke to actually felt a sense of responsibility for the four canoeists who died crossing Button Bay.

*The coast line, north of Churchill.*

*Groups of small beluga whales surfaced everywhere as the canoes crossed the mouth of the Churchill River.*

Pilots chastised themselves for not 'checking on them' more often.

The Royal Canadian Mounted Police maintain a master itinerary calendar on their office wall in Churchill and are on the alert for news of expeditions that they have on record.

Considering the dangers, it is perhaps difficult to understand why anyone would choose to canoe on this body of water. Many parties weigh the risks and correctly elect to be picked up once they reach Hudson Bay. Arrangements to be met by plane or freight canoe can be made fairly easily by inquiring before the trip in the town nearest to the take-out point.

Expeditions that are properly equipped, that are true to a safety-conscious attitude, and that take sensible precautions, however, can minimize the risks associated with travel on Hudson Bay and be treated to some rare wilderness rewards.

One-half hour after we were confronted by the polar bear, we paddled onto Hudson Bay and encountered just one of those rewards. The Bay was sparkling in the sun and the delta was full of waterfowl. Snow geese, Canada geese, whistling swans, and common eider ducks were everywhere. Arctic terns and parasitic jaegers wheeled and dove overhead.

While sitting in our boats and watching the flocks of birds with binoculars, someone caught sight of a wolf. It was a tawny-coloured animal, a hundred yards off, loping across the tundra with a Canada goose in its jaws. We soon spotted two more wolves chasing down geese along the shore. The geese were apparently in the peak of their moult and, being flightless, were easy prey for the wolves that dashed along the shores and pounced on the unlucky and frantic birds.

To experience Hudson Bay is to exist with contrast. Beauty and violence are tightly juxtaposed and one's emotions fluctuate with the moods of the Bay. Fear of wind and waves, tidal misjudgement, or polar-bear encounters can be followed within minutes by the quiet exhilaration of glimpsing white beluga whales, timing the tides just right, paddling during a lovely ocean sunrise, or being escorted by a curious seal.

There are personal satisfactions that come with successful travel on Hudson Bay as well. A party must adapt to the conditions; to do otherwise is to invite accident or death. Expedition members must be prepared to sit out a storm, paddle only when it is prudent, avoid river deltas where polar bears tend to concentrate during the summer, and be cautious in all decisions. And at the end of the journey, there is the sense of accomplishment that stems from completing your expedition as a self-contained group, of dealing with risk successfully, and of seeing things from a perspective allowed to few people.

It took us two and one half days of tide-dependent travel to reach Churchill. Paddling across the mouth of the Churchill River to the town, we were greeted by the sight of many beluga whales. Groups of them surfaced everywhere, blowing spray and making sonar noises. We stopped paddling. Long swells rocked the canoes. Whales came close to us, seeming to investigate. They obviously knew we were there and surfaced close by. Twice they swam under our boats and we watched their white shadows in the cold water below. After a long time, we paddled quietly towards shore. Along the way, whales continued to surface near by, as if escorting us to the end of our journey.

In paddling on Hudson Bay we developed a set of safety guidelines and a list of equipment which, when coupled with decisions based on a sincere respect for the treacherous waters, helped to minimize risk and enhance our enjoyment of the trip.

Our first guideline was to organize the itinerary to arrive at Hudson Bay as early in the season as possible. Ice is usually off the Bay in early to mid-July. By late August and early September, the weather is increasingly stormy. We allowed several days in the itinerary for the possibility of being weather bound, and brought food to cover those days.

Once on the Bay, we used tide charts to predict our timing and paddled only during high tide. We had roughly four hours of paddling time just before, during and just after high tide. During low-tide periods we took naps and had meals. This made for an odd sleeping and eating pattern, but it allowed for about eight hours of paddling each day and kept us close to shore in case the wind came up. We followed the shore line closely and were rarely paddling in water over our heads. No matter how calm the weather seemed we were never tempted to take a short cut across the Bay. The majority of deaths and accidents have occurred when canoeists have attempted to cross open water and were caught by storms. As much as possible we avoided river deltas along the coast where summering polar bears tend to congregate.

And finally, as a safety precaution, we left our trip itinerary on file with the Royal Canadian Mounted Police headquarters.

Our special equipment consisted of a tide chart for Hudson Bay; a stove and fuel, for wood is scarce; and large containers for fresh water which we filled at the river deltas in the event of being weather bound. We used spray decks on the canoes, and on future trips would probably take a starter pistol or rifle with bird-bomb blanks for protection against curious polar bears. ◆

# Some Early British Columbia Views and Their Photographic Sources

By Doreen E. Walker

*Recent research indicates that the photograph was a significant influence on the work of many nineteenth-century artists—among them Lucius O'Brien, eminent Canadian landscapist of the 1880s.*

Archives of Ontario, Toronto

*Lucius R. O'Brien, c. 1885.*

IN RECENT YEARS, a number of investigations have been undertaken into the relationship of photography and painting in nineteenth-century Canada. The result is a substantial amount of evidence which establishes the importance of the photograph as both challenge and inspiration to numerous artists. Lucius R. O'Brien (1832-1899), eminent Canadian artist of the 1880s, obviously was among the landscapists indebted to photography. The full extent of O'Brien's debt has as yet to be determined, but clearly a dependency can be demonstrated with O'Brien's British Columbia views for the impressive two-volume publication *Picturesque Canada*.

It is relevant to recall that by the early 1880s O'Brien's reputation as a leading figure in the Canadian art world was based on three major activities. First, his association with the Ontario Society of Artists as exhibitor from 1873, and vice-president from 1874 to 1880; second, his participation in the establishment of the Royal Canadian Academy and subsequent appointment as first president by the Marquis of Lorne, Canada's Governor-General, 1878-1883; and third, his double role as art editor and a key contributor to *Picturesque Canada*. It was towards the close of his association with the latter undertaking that O'Brien's first British Columbia landscapes appeared.

*Picturesque Canada; The Country As It Was and Is* was published in instalments commencing in January 1882. The model for it was the highly popular two-volume *Picturesque America* published in New York in 1872-74. Its aim was to bring to the public through wood-engraving illustration and descriptive text a vision of the vast Dominion. In a published announcement of 1881 the public was informed that George Grant, Principal of Queen's University, had been appointed Editor-in-Chief; that O'Brien was to supervise the Art Department; and that the work for the project was well underway. By 1882 the publication was being heralded as a 'noble treasure house of Canadian scenery'.

It is generally accepted that 'a veritable army of specially commissioned artists painted views in all parts of the country'; and undoubtedly travel for the project was both extensive and arduous. A Toronto reporter stated that 'the illustrations are all specially prepared for this work

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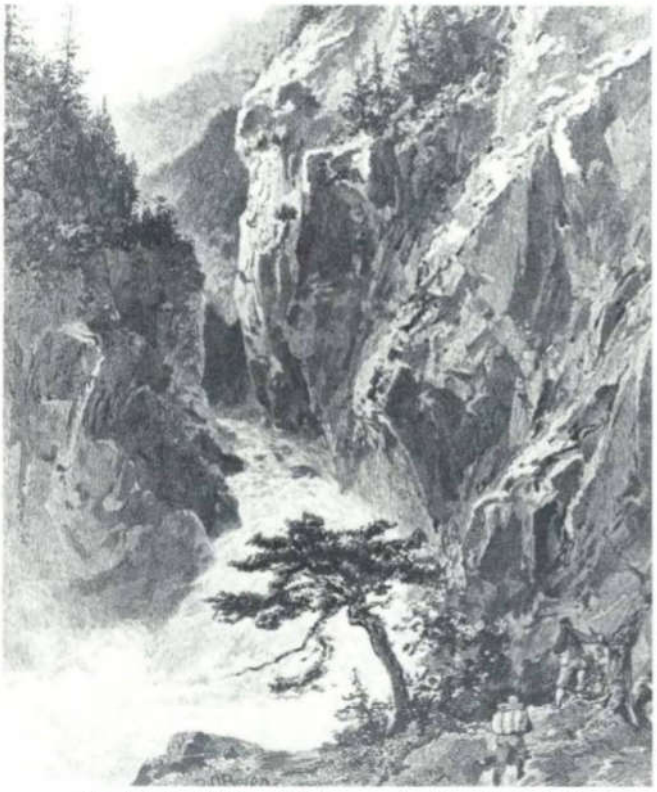
*The author wishes to express appreciation to J. Robert Davison, Archivist, Visual Records, Provincial Archives of British Columbia, for his assistance in obtaining photographs.*



Vancouver Public Library

*Fig. 1. L.R. O'Brien, 'A Cañon on the Homathco', 1884. One of six views of British Columbia O'Brien did for 'Picturesque Canada'.*

Provincial Archives of British Columbia

*Fig. 2. Charles Horetzky, 'Grand Canyon, River Homathco, looking down', c. June 1875.*

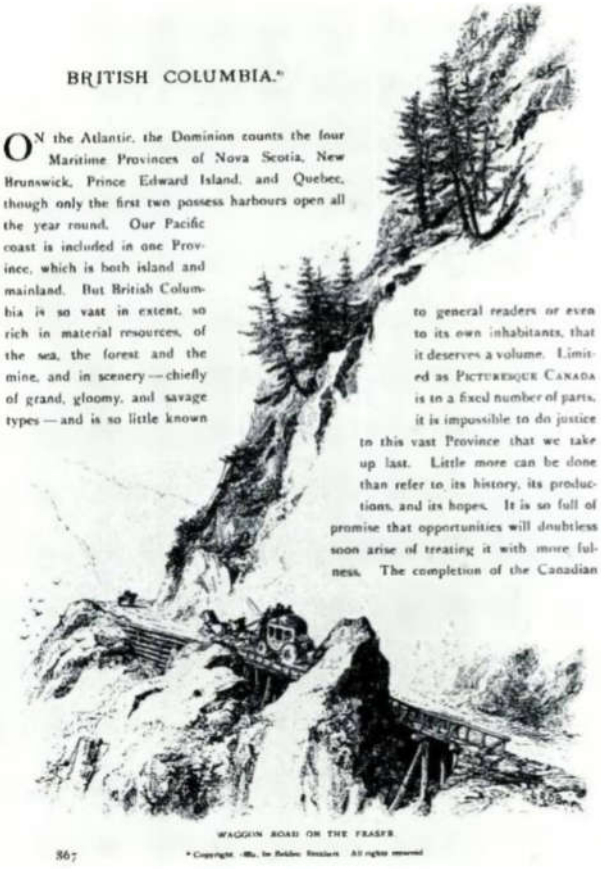
with sketches taken on the spot.' And another writer disclosed that the area of western Canada, including the 'Mountain Province beyond,' would be both 'reached and described'.

Through various published references one can follow the development of the project; and in a report for 1884 one reads that the final number (36) was issued by the publishers 'early in the fall'. Six views of British Columbia, bearing signatures 'L. R. O'Brien' were included in this issue. It is with these works that one must question the scope of O'Brien's travel prior to final publication, for it was clearly not as extensive as has often been assumed. Indeed, there is no evidence that O'Brien was in British Columbia until 1886, two years after the final instalment appeared.

It is known that O'Brien was sketching for the project in Quebec and the Atlantic coastal area after his return from England in August 1880, and that in 1881 he was working primarily in regions of Ontario. He worked again in eastern Canada in 1882, and in 1883 he went once more to England. By 1884 O'Brien was completing his British Columbia landscapes in preparation for the engravers, and on 4 July, according to the artist's studio journal, the final work was completed and the account rendered. These views were based, undoubtedly, on photographic images of those who were in the province before him. Certainly landscape photographs were readily accessible in late-nineteenth-century Canada: they have been described as 'elegant fore-runners of picture post-cards'.

In his preface Grant discloses that certain photographs had been made available to artists 'for illustrating the Hudson Bay route' and for a 'striking view of buffalos among the foot-hills', but there is no further acknowledgement.

What then were O'Brien's possible sources? *A Cañon on the Homathco* (fig. 1) which introduces the British Columbia chapter, bears a striking resemblance to a photograph taken by Charles George Horetzky in 1875 (fig. 2), and illustrates most admirably a portion of Grant's descriptive text. Horetzky, a member of the Canadian Pacific Railway survey team, photographed the Homathco River area in connection with a proposed northern railway route. There are minor alterations and additions, for exact duplication would not have been the artist's intention, but this view must surely have been O'Brien's source. A bound volume of survey photographs once owned by Lord Dufferin, Governor-General of Canada, 1872-78, contained this work. O'Brien was well acquainted with Lord Dufferin during the latter part of Dufferin's term, and possibly knew the photograph originally through this association.



BRITISH COLUMBIA.*

ON the Atlantic, the Dominion counts the four Maritime Provinces of Nova Scotia, New Brunswick, Prince Edward Island, and Quebec, though only the first two possess harbours open all the year round. Our Pacific coast is included in one Province, which is both island and mainland. But British Columbia is so vast in extent, so rich in material resources, of the sea, the forest and the mine, and in scenery—chiefly of grand, gloomy, and savage types—and is so little known to general readers or even to its own inhabitants, that it deserves a volume. Limited as PICTURESQUE CANADA is to a fixed number of parts, it is impossible to do justice to this vast Province that we take up last. Little more can be done than refer to its history, its productions, and its hopes. It is so full of promise that opportunities will doubtless soon arise of treating it with more fulness. The completion of the Canadian

WAGGON ROAD ON THE FRASER.

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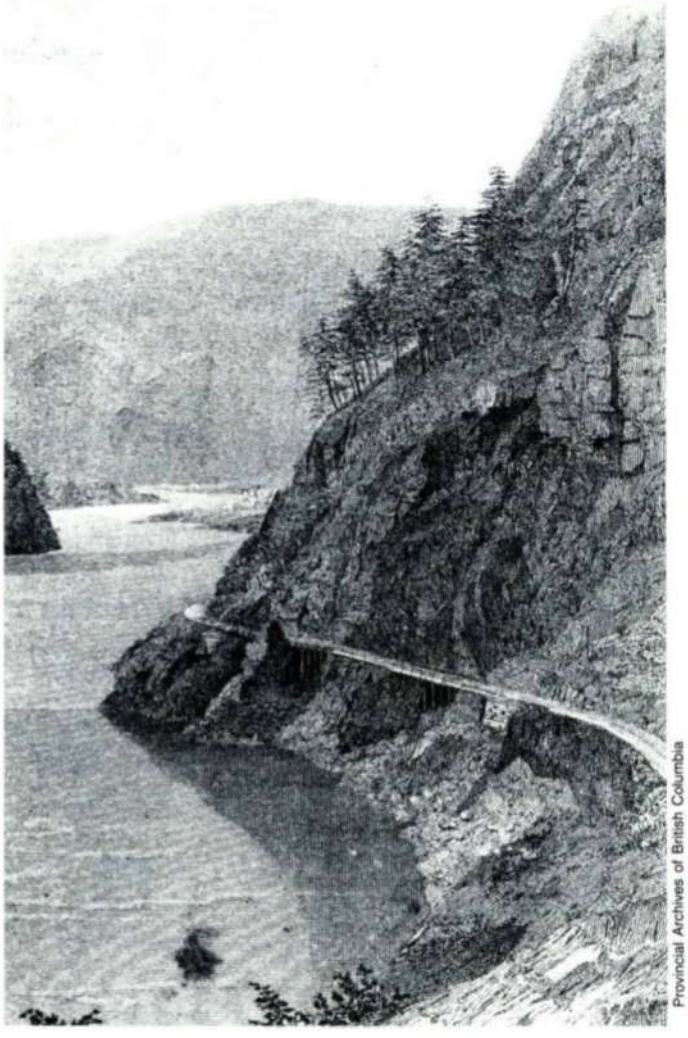
*Fig. 3. L.R. O'Brien, 'Waggon Road on the Fraser', 1884.*



Provincial Archives of British Columbia

*Fig. 4. From a photograph by G.M. Dawson, 'Fraser River—18 miles above Yale, B.C.', 1875.*

O'Brien's other British Columbia views are considered composites (as are many late-nineteenth-century photographs) based on more than one photographic source. Certainly for *Waggon Road on the Fraser* (fig. 3) there were numerous photographs available, as well as engravings of such photographs which appeared in publications of the time. A panoramic view (fig. 4) photographed by Dr G. M. Dawson in 1875, and later lithographed, was perhaps O'Brien's basic source; its winding road, jutting rock formations, and towering bluff with the sparse scattering of trees are incorporated. But the artist adopts a close-up view to suggest, as does Grant's text, that the Fraser is 'hundreds of feet below'.

*Esquimalt Harbour* (fig. 5) likely stems from a photograph (fig. 6) which shows the harbour from a similar point and includes ships of the British fleet at anchor. The startling background transformation of lowly hills to lofty ranges, however, quite clearly derives from a sketch by the Marquis of Lorne which depicts the island harbour from an entirely different angle. Employing further artistic licence O'Brien suggests a moonlit scene.

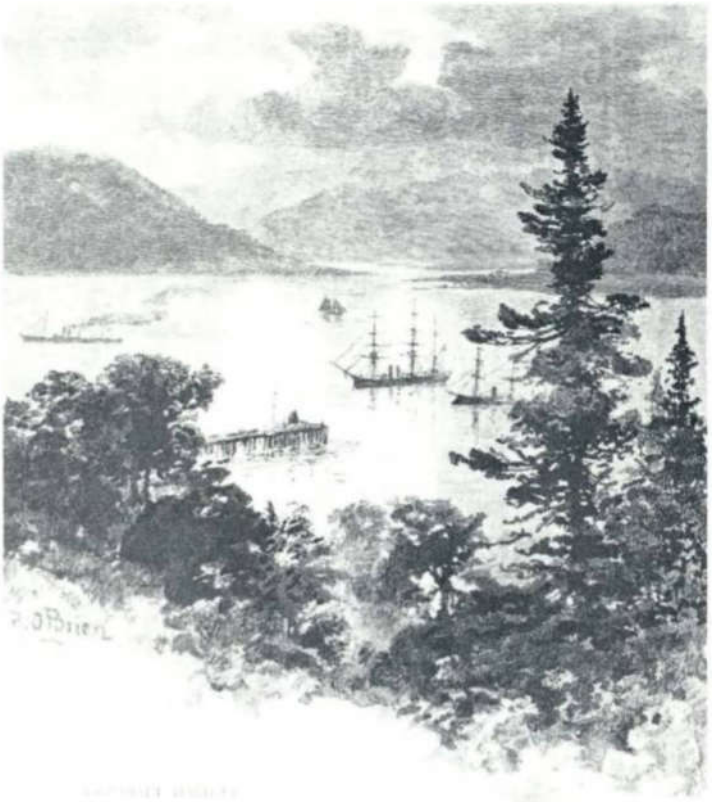


*Fig. 5. L.R. O'Brien, 'Esquimalt Harbour', 1884.*

*Fig. 6. 'Esquimalt Harbour, B.C.'. Undated, but c. 1870.*

Public Archives of Canada C-33452

*Fig. 7. L.R. O'Brien, 'On the North Thompson River', 1884.*

*Fig. 8. Benjamin Baltzly, 'Glaciers on the North Thompson River', 1871.*

Kamloops Museum and Archives

*Fig. 9. Benjamin Baltzly, 'Photographer's Tent at the Lower Gate of Murchison's Rapids', 1871.*

Kamloops Museum and Archives

*On the North Thompson River* (fig. 7) likely originated in a photograph of the area 165 miles above Kamloops (fig. 8), which was one of a series taken in 1871 during a government survey expedition headed by Alfred R. C. Selwyn, Director of the Geological Survey of Canada. Accompanying the group and under partial sponsorship of the Montreal photographic firm of William Notman were Benjamin F. Baltzly and his assistant John Hammond who documented the areas surveyed in an extensive series of photographs.

The source for the arbitrary alteration in the river's course (figs. 7 and 8), and for Grant's 'higher ranges of snowy peaks beyond', is found perhaps in a second photograph from the expedition. An engraving after this photograph appeared in Grant's *Ocean to Ocean* (plate 39) published in 1873, and was among the illustrations listed as being photograph-derived. O'Brien's tent, quite clearly, is from a third work of the 1871 series (fig. 9).

O'Brien would have had easy access to these images, for Baltzly, as early as 1872, was soliciting inspection of his western photographs, and noting that copies could be had from 'Mr. Wm. Notman'.

For *Yale* (fig. 10), the final illustration in the volume, the choices would be many, as early views abound. O'Brien's somewhat standard viewpoint permits inclusion of a portion of the river, the settlement at the river's edge, and the mountains of which Grant wrote 'enclose the village on every side'. Other features are significant in determining O'Brien's primary source: the railway tracks, the two houses on the right of the tracks (both with spreading roofs and one with a second chimney), and the nearby poplar trees. These are found in combination in only one of the many photographs examined (fig. 11). For the far right portion of O'Brien's view—the channel and promontory area—an earlier photograph by Frederick Dally, a well-known photographer of the 1860s, was likely used. *The Cariboo Sentinel* for 26 July 1868, recorded that Dally had recently passed through the area.

The sternwheeler, a common sight in views of Yale, was featured by O'Brien, and as with other aspects of his initial British Columbia scenes, would be based on photographs. It is hardly likely that these early uses of photography formed an isolated case. Indeed, in examining O'Brien's later British Columbia activities there are indications of a continuing involvement.

O'Brien was among the first of the artists to journey to the Rockies and beyond after the completion of the Canadian Pacific Railway in 1885. A small sketch-book in the Provincial Archives of British Columbia offers by means of sketches and notations, significant, though limited, evidence concerning the artist's whereabouts,

*Fig. 10. L.R. O'Brien, 'Yale', 1884.*

*Fig. 11. 'Yale'. Undated, but c. 1881.*

Vancouver Public Library

National Gallery of Canada, Ottawa

*Fig. 12. L.R. O'Brien, 'A British Columbian Forest', 1888. Water-colour, 54.4 x 76.5 cm.*

City Archives, Vancouver, B.C.

*Fig. 13. C.S. Bailey, 'Spruce Tree', 1888.*

interests and activities during his western travels. Commencing in 1886, so the sketchbook verifies, O'Brien travelled west on CPR passes for three consecutive years, and in 1887 and 1888 he continued on from the mountains to the coast.

Amongst O'Brien's entries are those which provide evidence of a direct involvement with photography. One page of notations is headed 'Photographs 1886'. Twelve subjects are listed, including 'Effect of Mist on Mountain,' and 'cow boy and horse different poses', with records of light conditions and speeds. Another page cites 'Packages to Rock Mountains' for 1887 and includes '1 camera'. O'Brien has also listed five points of instruction concerning exposure times.

O'Brien obviously took—at least on occasion—his own photographs. Perhaps they, along with the field sketches, were intended to furnish information for future use. *A Scene in the Rockies*, 1887, and *Wagon Road on the Fraser*, 1887, both in the National Gallery of Canada, include 'Effect of Mist on Mountain,' as well as 'cow boy and horse different poses'.

One further link between O'Brien and photography is suggested with the artist's *A British Columbian Forest*, 1888 (fig. 12), and a photograph by C. S. Bailey of a scene in Stanley Park entitled *Spruce Tree* (fig. 13). Bailey is listed as a photographer in the Vancouver Directory for 1 March 1888, and it is known that 'spruce tree' was included in a selection of Bailey works sent to Paris in February 1889. As the background foliage suggests a pre-November date, it could be assumed that the photograph was taken in the summer months of 1888—the months O'Brien was in the coastal area. In fact it was likely taken shortly after 30 June when the following item appeared in the local press:

> Within the last day or two the Board of Works have had a path cut from the Park road . . . to a clump of some of the finest trees to be found in the magnificent timber with which the park is covered. The group comprises two spruce and two cedar trees. The former, at 6 feet from the ground, have a girth of 34 and 38 feet, while the cedars at the same height measure no less than 43 and 50 feet respectively in circumference. The giants of the forest will doubtless attract a great deal of attention from visitors from the east, whose incredulity as to the size with which the trees attain here will be completely dissipated by a sight of these four trees.

O'Brien like Bailey was attracted to the western woods, and in a lengthy letter of 30 July he wrote of a British Columbian forest with its 'enormous trees and wild luxuriant undergrowth' as a 'never to be forgotten sight'. It is possible that O'Brien's painting of the forest, a relatively large (54.4 x 76.5 cm) and detailed water-colour, was not finished (perhaps not even begun) on the spot. In fact it is suggested that in line with earlier practice the artist has employed a photograph, if not as source then at least as aid, in recreating—perhaps later in the year—the famous forest view.

It is difficult to believe that O'Brien with his interest in photography did not know of Bailey and his work. The marked similarity between photograph and painting suggests there was such knowledge.

O'Brien's involvement with photography, however limited, is hardly surprising. A number of his fellow painters in the Ontario Society of Artists were employed at Notman & Fraser, a Toronto branch of William Notman's firm. This photographic studio, a gathering place for artists at the time, has been referred to as Toronto's leading art school of the seventies. And it was in the gallery of Notman & Fraser in 1873 that the first exhibition of the Ontario Society of Artists was held.

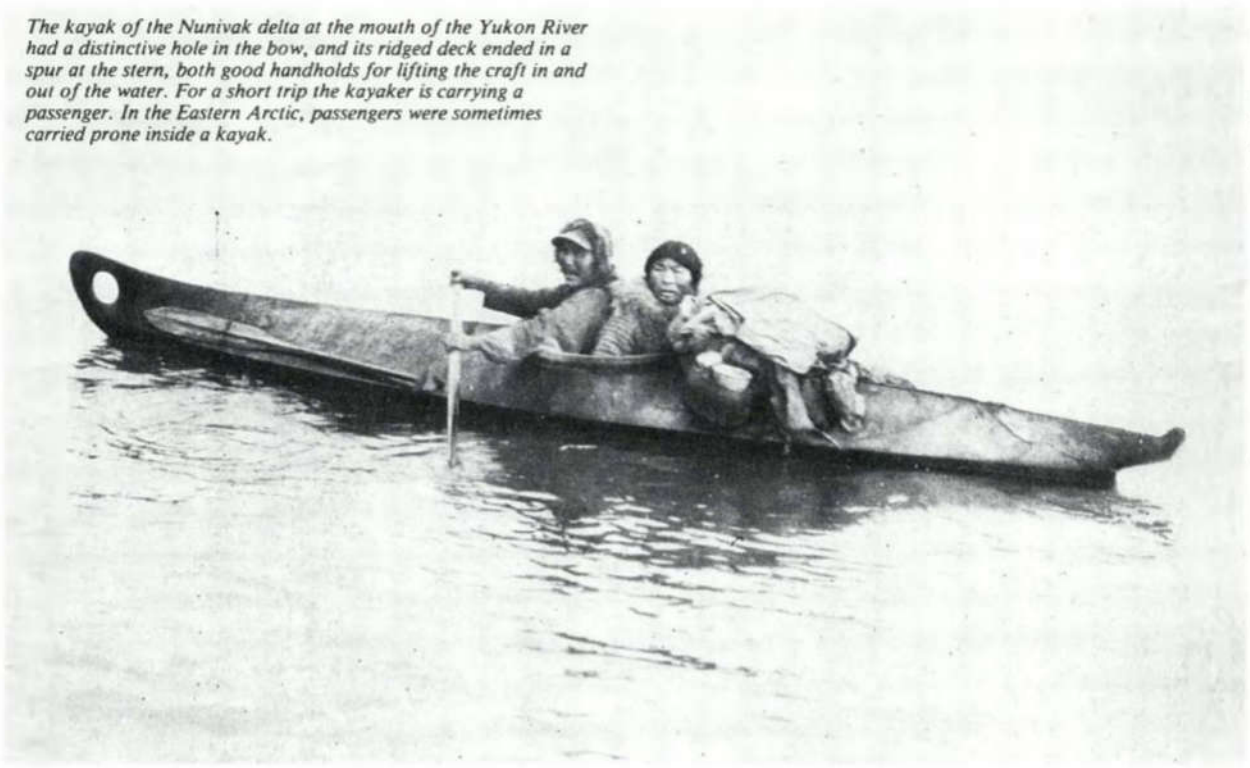
The artists were engaged primarily in tinting photographs and painting background scenes for composites; but there were others, some among the Notman & Fraser group, who used photographs as aids in the execution of their own works. O'Brien as an active figure in the art scene would be well aware of the photograph's potential both as initial source and reliable guide. From the foregoing considerations, he seemingly employed the photograph in both capacities.

In conclusion, one might wonder why O'Brien, regarded as 'an eminently truthful painter', if using photographs, would depart from sources. And *Picturesque Canada* was a project promising 'fidelity' in its illustrations. Perhaps partial reason stems from a prevalent attitude which considered painting as superior to photography. A writer of the time, in stressing the benefits of 'breadth of vision' in the creation of a picture, added defensively: 'Photography will give the detail of the landscape under any light and shade, and from any point of view; but the art of the true artist is required to bring his accumulated study of nature to bear on this subject.'

A more direct bearing on O'Brien's approach can be traced to the work of Thomas Moran, a prominent American illustrator, who was a contributor both to *Picturesque Canada* and the earlier *Picturesque America*. Moran is known to have worked from photographs, to have modified their imagery, and to have executed composites. With reference to a composite painting the artist has stated that his purpose was 'to convey a true impression of the region—not its strict topography'. In considering specifically Moran's work for *Picturesque America* (which O'Brien surely knew), Elizabeth Lindquist-Cock has commented: 'There was no doubt that Moran was trying to supply information about the country; yet he took whatever liberties he needed to achieve pictorial excellence or drama.'

Lucius O'Brien, in a number of his British Columbia views, apparently chose to follow suit. ◆

*The kayak of the Nunivak delta at the mouth of the Yukon River had a distinctive hole in the bow, and its ridged deck ended in a spur at the stern, both good handholds for lifting the craft in and out of the water. For a short trip the kayaker is carrying a passenger. In the Eastern Arctic, passengers were sometimes carried prone inside a kayak.*



Smithsonian Institution, National Anthropological Archives 34358-b

# The Skin Boats: Kayaks and Umiaks

## By Philip Shackleton and Kenneth Roberts

*'Among the Inuit people, who conceived and developed it [the kayak] as the perfect boat for their needs of yesterday, it is becoming a memory.'*

*Authors Shackleton and Roberts sketch the history of the Inuit skin boats and describe in detail the construction of the kayak.*

*This section from their book 'The Canoe', to appear in October 1983, is published by permission of Macmillan of Canada, Toronto.*

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*Philip Shackleton of Manotick, Ontario, author of 'The Furniture of Old Ontario', is perhaps best known as an authority on early Canadian furniture. He has devoted some 12 years to researching and writing 'The Canoe' with co-author Kenneth Roberts.*

*Kenneth Roberts of Ottawa, journalist and photographer whose career includes some years on the staff of 'Saturday Night', is now retired from his position of public relations officer with the Department of National Defence.*

IN 1814 A YOUNG LIEUTENANT aboard H.M.S. *Rosamund* leapt from his bed and raced up to the deck when he heard that Eskimos, the foreigners' name for these people, had been sighted as the ship was passing the Ungava Peninsula. Later he described the scene:

> Alongside the ship were paddling a large assemblage of canoes, of the most curious construction: these were built of a wooden frame-work of the lightest materials, covered with oiled seal-skin, with the hair scraped off; the skin being sewed over the frame with the most astonishing exactness, and as tight as parchment on the head of a drum. But the most surprising peculiarity of the canoes was their being *twenty-two* feet long, and only two feet wide. These canoes are only capable of containing one person, for any useful purpose; the slightest inclination of the body, on either side, will inevitably overturn them; yet in these frail barks will the *Esquimaux* smile at the roughest sea.

On the north Pacific shores, where Russian, Spanish, British and American ships explored and vied for the trade of the native people, essentially the same skin boats were used by the Koryak and Chukchi of the Asiatic mainland, the Aleuts on that chain of islands stretching westward from the Alaska peninsula, and the mainland people of the northernmost American coasts. The first strangers to see Aleut kayaks, or, as the Russians called them, *baidarkas,* were the men of Vitus Bering's exploring expeditions to northeastern Siberia and the

surrounding waters. During the second trip, in 1741, Georg Steller, a young German scientist, examined the native craft in some detail:

> The boats of these Aleuts are about two fathoms long, two feet high and two feet wide from above; in the front, at the prow, they are pointed, at the stern the sides form an angle. Evidently the frame consists of two longitudinal poles which are joined at the ends and kept apart by cross bars. The frame is covered outside, as it seems, with seal-skins and painted a dark brown colour . . . . About two arshins [four feet, eight inches] from the stern there is a round opening with a skirt of whale's guts. By means of a cord, put through a hem, the lower border of the skirt may be tightly bound around the edge of the hatch while down in the hatch and stretching out his legs the American draws the upper hem of the skirt around his body under the armpits and ties it with a noose; thus the water cannot penetrate into the boat.

Bering's men had no idea that the strange craft they were inspecting was to become the key to the Russian fur trade, soon to develop on the northwest American coast. As it happened, one of Bering's ships was wrecked; survivors built a small boat and sailed back to Petropavolovsk, carrying with them a few lustrous skins of the sea otter. These furs, it was learned, commanded fabulous prices in China. Soon the rush was on.

Lured by the promise of fortunes, Siberian freebooters, known as *promyshlenniki,* systematically enslaved the Aleuts. They terrorized the people of the islands, burning villages whose people would not cooperate, killing, and violating Aleut women and making of them hostages to force the men into hunting the otter for them. By 1784 one of the traders, Gregory Ivanovich, had planted the first permanent Russian colony on Kodiak Island, just south of the Alaska Peninsula. In 1791 he installed as manager there, Alexander Baranov, who was to make of himself a legend and who began his term by arriving in the settlement in a kayak. He had built it himself and covered it with sea-lion skins, after the fashion of the Aleuts.

When Catherine the Great sent a scientific exploring expedition to inspect her Alaskan holdings, its English commander, Captain Joseph Billings, found that the Shelikov-Golikov Company, by keeping wives hostage, could call out all the men between eighteen and fifty for otter hunting sweeps. Up to a thousand men would appear in waterproof jackets made from intestines of sea lions. The company owned six hundred baidarkas which, unlike the one-man kayaks of the Eastern Arctic, each had cockpits for two or three hunters. Ranging for hundreds of miles through the Aleutian Islands and south along the mainland, the skin-boat fleets were usually accompanied by an eighty-ton galliot, a boat that carried provisions and stored the fur catch. The baidarkas were hauled aboard from time to time to be dried and waterproofed.

Martin Sauer, secretary of the Czarina's fact-finding expedition, was thoroughly impressed by Aleut seamanship. 'The natives,' he wrote, 'observing our astonishment at their agility and skill, paddled in among the breakers, which reached to their breasts, and carried the baidarkas quite under water; sporting about more like amphibious animals than human beings.'

Despite the kayakers' extraordinary ability in rough seas, the ocean took its toll of them, and once, when moving southward along the coast, Baranov lost thirty kayaks with their two-man crews when a giant wave engulfed them all. Yet the fleets of Aleut paddlers covered untold sea miles in the hunt for otter. Baranov on one occasion made a deal with a Bostonian, Joseph O'Cain, mate of the *Enterprise,* lending the Yankee trader sixty Aleut hunters with their baidarkas and hunting gear for a poaching venture into the otter-rich waters off the coast of Spanish California. Baranov received urgently needed

*In the frontispiece to the 1675 edition of Martin Frobisher's 'Historia navigationis', reality has been distorted a bit by artistic licence. But the Inuit did use the spear thrower and trident bird spear with extra barbs on the shaft. Ferrules around the shaft of the double paddle helped to keep the paddler's hands dry, and the small device on the deck was used to tie seals to the deck or tow them home. The unicorn below was inspired by the ivory narwhal tusks the sailors found in the Arctic.*

National Library of Canada

Smithsonian Institution, National Anthropological Archives 38108

Public Archives of Canada C-1449

***Top:*** *Three-hatch boat and framework of another, from Knicklick, Prince William Sound, Alaska. Undated, but before 1925. In the centre cockpits of these three-man 'baidarkas', Russian fur traders accompanied their fleets of Aleut hunters on voyages of hundreds of miles in search of sea otter. The curious framing at the bow is clear in the uncovered baidarka.*

***Below:*** *During Parry's second voyage to the Eastern Arctic, 1821-23, Captain G.F. Lyon sketched the people in the area of the Melville Peninsula during a caribou hunt. These kayaks were round-bottomed and built for speed. They were measured at 25-feet long including a 3-foot projection at each end which turned up slightly.*

supplies and a share of the furs. The Spanish were furious, but they had no craft that could match and intercept the swift kayaks.

On the hunt baidarka fleets were often strung out for miles. When an animal was sighted the boatmen paddled as stealthily as possible until one of the hunters was close enough to let loose an arrow. When the otter dived, the hunter gave a shout and raced in closer. As many as eight baidarka crews surrounded the area and waited for the animal to surface. The tiring otter was driven under again and again until dispatched, and then the skin boats strung out once more in a long, sea-sweeping line.

Sauer was enchanted by the grace of the little craft, in particular that of the Unalaska kayaks:

> If perfect symmetry, smoothness, and proportion, constitute beauty, they are beautiful; to me they appeared so beyond anything that I ever beheld. I have seen some of them as transparent as oiled paper, through which you could trace every formation of the inside, and the manner of the native's sitting in it; whose light dress, painted and plumed bonnet, together with his perfect ease and activity, added infinitely to its elegance.

The kayak was a hunting tool, designed to carry the hunter to within striking distance of his prey. The hunting techniques for different creatures dictated different characteristics for the craft. To match a swimming caribou, the Inuit hunter needed a fast kayak, long and narrow and round-bottomed as well to present the least surface to the water, reducing skin drag to the minimum. Slain caribou floated and could be retrieved after the killing had been done.

Hunting sea mammals, however, demanded more stealth than speed. The hunter moved cautiously to get gradually within harpoon range of wary prey. He often had to put to sea in foul weather and to face wickedly dangerous water. Often, when a kill was made, he had to carry the carcass within the kayak or on its deck. Or he might tow the animal home, first blowing air beneath its skin to increase its buoyancy and plugging holes in the skin with ivory pegs. Needing, therefore, greater stability, his craft had more beam, a flatter bottom, and more carrying capacity than that of the caribou hunter. Sea hunters of the Canadian Arctic and northern Alaska had a cockpit coaming tilted up at the front to keep out water that broke over the foredeck.

Of all the variety of flat-bottomed kayaks, there were two broad categories: those of the Canadian Eastern Arctic and those of Greenland. Hunters in Greenland developed a small, narrow vessel with a flat, or almost flat, bottom to guarantee stability. It was scarcely possible to carry game home on this kayak, and the hunter normally towed a kill to shore. Being smaller and sitting lower, the boat tended to ship more water, and so the hunter sealed himself in with an apron and draw-

string or a complete hood tied around the cockpit coaming. This did away with the need for a high coaming to withstand deck wash. The man and his kayak were capable of weathering heavy seas, and if capsized by a breaking wave the hunter could right himself with a deft sweep of the paddle. In fact, to avoid a big, breaking wave that could damage the vessel, the hunter would purposely capsize, take the great force of the water on the kayak bottom, and right himself when the wave had passed.

In much the same way, the umiak was adapted to specialized local use. In Alaska, when it was used for hunting sea mammals of varying size and habit, it was small and built for speed under the thrust of a few single-blade paddles. Some Alaska umiaks were larger, carrying six to eight paddlers and a harpooner, and intended for whale hunting.

Ancient taboos prevented women from using the hunting boats, and so other large umiaks were built just for transport and travel. Women paddled along with their men and often made up the entire crew. With overhunting of the greatest of sea mammals, the whale hunt slowly died out in the eastern waters, and the umiak became a woman's boat. Umiaks on the northwest coast of Greenland, where whale hunting persisted to a more recent date, retained finer lines than those of the south. And the umiaks of Hudson Strait were so box-like that one suspects the builders there had long since lost interest in fine boat crafting.

The construction of a kayak or an umiak was a communal affair, both men and women contributing essential talents to the end product. In every instance, local preferences, traditions, supplies of materials, available tools, and the water and hunting conditions influenced the builders and shaped the character of the craft.

The making of a kayak was supervised by an experienced builder. He had the form of the boat in his mind and could calculate the various measurements with his hands and arms. As he walked or paddled along the beaches, looking for driftwood, he assessed just how each piece might fit into his plan. There were gunwales to split out and stringers and ribs as well, and so he collected more material than was actually required, making a clear allowance for errors and unexpected fractures in the precious and very limited wood supply. The job might take a year.

The first step was shaping and smoothing the two gunwale pieces that gave the kayak frame its strength. The ends were fastened together and the gunwales were then sprung apart to establish the actual shape of the craft. This form the builder made permanent by mortising deck beams between the gunwale strips—straight across if a flat deck was intended, or slightly curved to give the deck a camber that would drain any wash. Towards the centre of the kayak, a humped deck beam was inserted to support the cockpit coaming, and behind it an open space was left for the cockpit itself.

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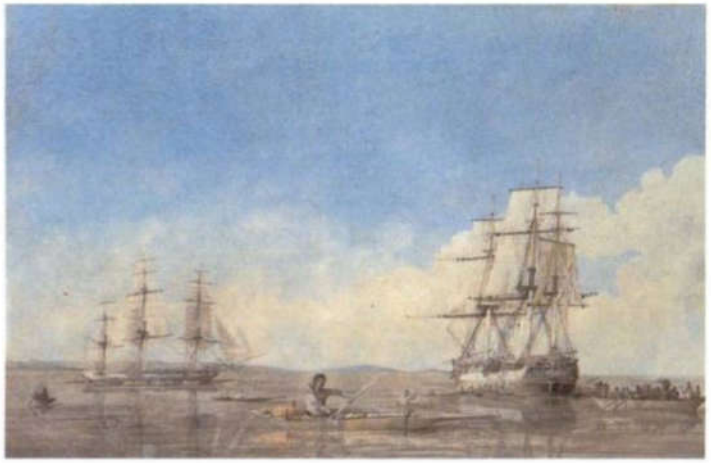

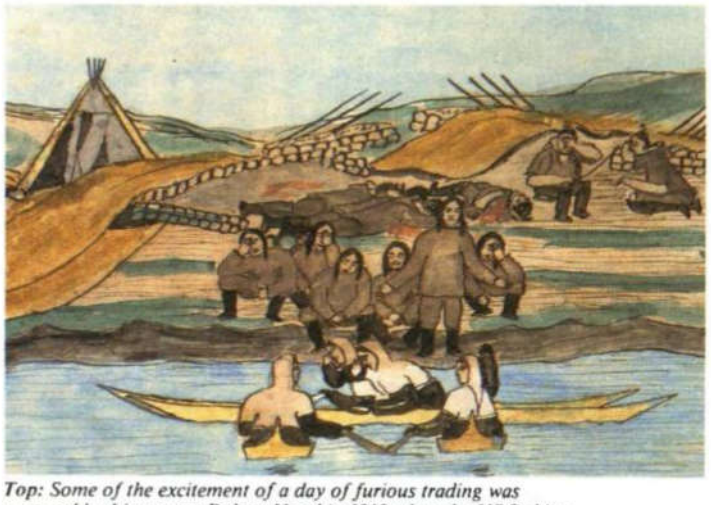

*Top: Some of the excitement of a day of furious trading was captured by Lieutenant Robert Hood in 1819 when the HBC ships 'Prince of Wales' and 'Eddystone' appeared off the Upper Savage Islands at the south tip of Baffin Island. There are at least nineteen Labrador-style kayaks clustered around the ships as well as a boxy Eastern Arctic umiak, no doubt loaded with furs and ivory for barter. On the nearest kayak the hunter has his harpoon on the foredeck, while on the afterdeck are the sealskin bladders used to mark a kill and keep a carcass afloat. The two posts behind the paddlers are used as bollards for towing home animals too heavy for deck cargo.*

***Below:** The Eastern Greenland kayak does not seem to have changed since the 1850s when a native artist, Aron of Kangek, did this water-colour depicting a legend of his people.*

*1. The strength of the kayak lies in its gunwales, fashioned from a driftwood log, and held to their boat shape by deck braces. A special, humped deck brace is inserted in front of each cockpit opening to support the cockpit coaming. A single deck stringer is lashed from bow to stern to the centre of the deck braces.*

*2. The deck frame is turned over and holes drilled in the gunwales. Round ribs are fashioned from split driftwood, softened in hot water and bent to shape using mouth and hands.*

*3. Once bent to shape, the rib ends are seated in the holes in the gunwales.*

*4. A long, flat stringer is lashed to the centre line of the ribs and two curved stringers fitted close to the curve of the ribs, giving the kayak a flat bottom. Two more stringers are fastened to the sides of the ribs and the frame secured with lashing and knots.*

*5. Moist sealskin is stretched over the kayak frame, trimmed to shape, scraped thin at the edges, and sewn into a long cover for the bottom.*

*6. Once the deck cover is sewn to the bottom skins and the cockpit coaming is lashed in position, the cover is allowed to dry and the skin becomes drum tight.*

*At left: The construction of a two-man kayak in the Belcher Islands is a joint venture of the men and women of the community. A two-man kayak is a rare boat in the Eastern Arctic, but the way it is built differs little from the normal one-man hunting craft.*

The deck frame was turned over and rested on a couple of supports. Shaping the ribs was next, and then mortising their ends into holes drilled or cut into the underside of the gunwale pieces. These ribs were of split cedar or spruce, softened in hot water to ease their bending, or of green willow withes that needed no soaking. The rib curve chosen gave the kayak a round bottom for speed or a flat bottom for stability or a gentle V profile as a compromise. With all the ribs in position, a keelson was laced to each of them inside the frame, curving from bow to stern, the profile varying from region to region. Further stringers were laced outside the ribs to fill out the kayak's particular local form and to increase its longitudinal strength.

There was enormous variety in the shaping of bow and stern, design distinctions that affected the behaviour of the craft in the water and that gave each boat type a recognizable local character. In some kayaks the keelson simply curved upward to join the gunwale ends in a sharp point. In others the gunwales, keelson and stringers were mortised at each end into a naturally curved root piece or a carefully shaped board or block which formed stem and stern pieces. The regional procedure established the regional profile.

With the now-rigid kayak frame righted once more, the cockpit hoop was tied into position. This framing might be circular or oval, D-shaped, or essentially triangular with corners rounded. It might be cocked up at front to shed water coming over the foredeck or lie level with the deck if the hunter was to use an apron to keep water out.

As the wooden framework of the kayak neared completion, the women began to prepare the sealskins that would cover it, scraping and curing the skins, removing every scrap of fat, keeping them naturally moist by storing them in a leather sack, then scraping again as the hair became loose. They matched the skins, trimmed them to size, and chewed the edges where they would be sewn with threads of animal sinew, of which the caribou supplied the longest and most durable. Then, working in a group around the wet rawhide pieces, the women sewed them into one long sheet with overlapping seams and blind stitching. This was draped along the overturned kayak frame and stretched out by many hands, drawn tight across the stringers, pulled taut around the gunwales, and sewn at bow and stern; then the long edges were pulled together over fore and after decks with a cross-thonging. Nimble fingers with bone needles worked quickly to complete the sewing before the skins began to dry. With the drying, the hide covering became drum-tight and hard within a few hours.

This sealskin sheath seldom lasted more than one season. When ice locked the waters, many kayaks were stripped, and the old covering and its lashings were dispatched by the often ravenous sled dogs. Whether with its skin cover or stripped to bare frame, the kayak was stored for the winter on a stone or wooden scaffolding, securely out of the reach of dogs and wild animals.

In winter the people worked on the accessories for their kayaks, carving double-bladed paddles, trimming the blade edges with bone to withstand chipping by ice, and making ferrules, usually of leather and mounted one to each side of the paddle grips, to prevent icy drip water from reaching the hunter's hands. Paddles were decorated with bone and ivory inlay work and coloured with paint compounded of red ochre and fish oils. There were ivory plugs to be carved for emergency use should a kayak develop holes in its skin while at sea. There were toggles of bone to be made to hold the hunting weapons securely to the deck in front of the paddler.

Then there were hunting tools to make: harpoons and lances, throwing sticks and bolos, nets and other fishing gear, bows and arrows. Many of the old implements and accessories reveal an exquisite artistry in utilitarian forms; work which, with stone age tools, often took months to complete. The long, severe winters provided the months for such work, and as the craftsmen sat comfortably among their furs in their sod houses or igloos, they sang and they talked and they retold stories that had been told a hundred times before.

The kayak was a source of pride to the hunter who owned it; it proved that he was capable of acquiring the necessary raw materials and of mustering community help for its construction. To the family it was an economic necessity: the means of obtaining their food and clothing. For the craftsman it was an important project on which he could lavish his skill and creative imagination. To the band, as to the family, it was a vital asset, for the successful hunter shared with those who were hungry.

The traditional skin kayak has all but disappeared from the Arctic. Commercially made canoes with outboard motors have long since supplanted it as the chief transport for hunters. The old skin-covered kayaks today are more often to be seen in museum exhibits than in arctic waters. Among the Inuit people, who conceived and developed it as the perfect boat for their needs of yesterday, it is becoming a memory. A recent newspaper story has reported, not without some appreciation of the irony, that a British firm which manufactures kayak kits has been seeking to establish a market for its products among the Inuit of the Canadian North. ◆

**BATTLE FOR THE WEST**
**Fur Traders and the Birth of Western Canada**

By Daniel Francis, Hurtig Publishers, Edmonton, 1982. 191 pp., illus.
$18.95 cloth; $9.95 paper.

*Reviewed by Shirlee A. Smith*

In the introduction to *Battle for the West,* Daniel Francis states: 'in the last decade there has been a great deal of academic work done on the history of the fur trade. . . . It seems time, therefore, for a narrative history of the trade which conveys these new perceptions to a general readership.' The goal is an important and necessary one, but it misses the mark.

Of the 191 pages, 164 are comprised of text which covers the period from the explorations of the La Verendryes to the intervention of the International Financial Society in Hudson's Bay Company affairs in 1863. The emphasis is concentrated on the exploits of a few well-known fur traders, including Peter Pond, Alexander Mackenzie, David Thompson, John McLoughlin and George Simpson. The prize of 'battle' was not the capture of invading armies, but the capture of the last beaver lodge.

This book incorporates some of the recent interpretations of fur-trade history, especially those of Jennifer Brown, Arthur Ray, Sylvia Van Kirk, and Daniel Francis's previous work which he co-authored with Toby Morantz. In a book of this brevity generalities cannot be avoided. On page 51, for instance, the author states that a 'Hudson's Bay Company trading house resembled a military barracks'; this would have surprised Ferdinand Jacobs who in 1762 wrote that 'the worst Brothel House in London is Not so Common a Stew as the mens House in this [York] Factory'. It is to be regretted that he perpetuated the myth that Kelsey's diary was suppressed (p. 29). This diary was first published in the parliamentary report for 1749, and published with explanations in *The Kelsey Papers* by Arthur Doughty and Chester Martin, 1929, and enlarged upon in *Letters from Hudson Bay 1703-40, HBRS Vol. XXV,* K. G. Davies, ed., 1965. The book is marred by uneven writing, repetition, and minor spelling errors. The author has done a considerable amount of research in fur-trade history, so one can only assume that he was ill-served by his publisher. These irritations could have been easily corrected by a competent editor.

The value of this book to the general reader lies in the fact that it sweeps away some of the fur-trade stereotypes. Indians, for example, are portrayed as independent and shrewd bargainers, other than, as has frequently happened in the past, mere pawns in the hands of unscrupulous fur traders. On this point alone the book serves a useful purpose.

*Shirlee A. Smith is Keeper, Hudson's Bay Company Archives, Provincial Archives of Manitoba.*

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**GENTLEMEN EMIGRANTS**
**From the British Public Schools to the Canadian Frontier**

By Patrick A. Dunae. Douglas & McIntyre, Vancouver/Toronto, 1981. 276 pp., illus. $18.95.

*Reviewed by Hartwell Bowsfield*

In *Gentlemen Emigrants* Patrick Dunae is in tune with two current trends in Canadian historical writing: an interest in immigration, and the study of ethnic groups. The 'gentlemen emigrants' of his title refers to the upper middle class young men from the English public schools, retired military officers, and aristocrats who 'trooped into the backwoods of Ontario', 'fanned out across the prairies', and 'poured' into British Columbia in the nineteenth century. Dunae considers this group as an ethnic group as much entitled to study as the Irish, the Scots, Ukrainians, or Finns. His selection of what he calls a 'neglected' class, on the other hand, reverses recent attempts to write history 'from the bottom up', i.e. the story of those unknown and unlettered thousands who populated Canadian factories and farms. He returns to history from the top down—history through those 'genteel' folks who left published journals, diaries, and correspondence as a record of their emigrant experience. The existence of such a body of published accounts (and it is abundant as Dunae's extensive research

reveals) makes it possible for Dunae to personalize the emigrant experience of this upper middle class group. The lesser folk, the less well-bred who never attended public schools have no place here; they must therefore, having left no record of their lives, end up in the historian's account as a mere statistic.

Use of the personal record is the strength of this carefully researched, well-written, and highly readable account, which is a series of vignettes of emigrants organized into a number of categories (pioneer gentlemen, supernumerary gentlemen, high-class cowboys, remittance men, etc.). The main attraction of the book is this biographical approach, for Dunae has a fine sense of human drama and an eye for the colourful and eccentric personalities in the group. The cast of characters fills a broad stage ranging from half-pay officers in Upper Canada such as John Moodie and Thomas Traill, to aristocrats who organized 'gentlemen's colonies' on the prairies such as that at Cannington Manor, and to the cultured and refined squires of the Gulf Islands and Victoria in British Columbia.

The group is introduced as a product of the English public school system: men 'well-born and gently bred', 'self-reliant, and morally upstanding' who had received the traditional liberal-classical education but found themselves ill-equipped to compete in the changing industrial-commercial world of the nineteenth century. The professions to which they had traditionally gone were becoming over-crowded, more competitive, more specialized, and more selective. Socio-economic changes had made many within this élite group redundant, forcing them to seek an economic and social outlet in the colonies.

Dunae advances some very substantial claims in assessing the contribution these well-bred emigrants made to Canadian society. As agricultural settlers the gentlemen emigrants, he states, 'were largely responsible for clearing the backwoods of southern Ontario, for opening the Ottawa Valley, and for making the first assault on the muskegs of Muskoka'. They opened mines and chartered railways. They established literary and scientific institutes. They endowed churches and schools. They became doctors, lawyers, and they entered the civil service. 'In short, they . . . made significant contributions in all walks of life and in all parts of the country.'

That this élite group of British emigrants had an economic and social influence in Canadian development could not be denied. In many communities they did, as claimed, set a 'tone' with their gentlemanly manners but whether as a group they should be exalted as 'nation builders' is questionable. Not all of them can be said to have graced Canadian society with their presence, to have attained the social or economic status they expected, or maintained the standards expected of gentlemen. John Swain, 'from a respectable family', came to Canada in 1867 and eventually was able to move into the 'upper echelons' of Ontario society but one wonders what became of his friend, Hugh Gibson, who drifted from job to job, was called 'scruffy', took to drink and became, according to Swain, 'a consummate blackguard'. Many of the gentlemen emigrants were forced to become waiters and dishwashers in saloons — a far cry from those who settled into the refined 'Devonshire' society and surroundings of Victoria. One ex-Guardsman became an undertaker's assistant in Victoria's Chinatown. Others of this élite group of gentlemen joined the ranks of other impoverished emigrants supporting themselves as ranch hands, hunting

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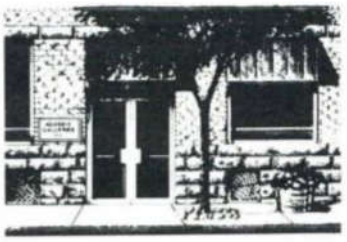

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guides, prospectors and farm labourers. Some ill-equipped to meet the economic changes in Britain remained ill-equipped when they reached the Canadian prairies. They became remittance men dependent on an allowance from home. They were 'dudes' and 'greenhorns' whose inadequacies led to the newspaper advertisement 'No Englishmen Need Apply'. Clearly many of the grey flannel and striped blazer background contributed little to Canadian development. They did, however, bring the English public school system 'into disrepute'.

It is Dunae's inclusion of these 'gentlemanly derelicts' that creates the impression that the influence of the English public school graduates in Canada may be exaggerated. He attributes perhaps too much to the group. It is true that these men, conservative, monarchist, and imperial in their thinking were in the Lieutenant-Governor's camp opposing the rebel William Lyon Mackenzie in 1837-38. But so were many others from Britain — from all classes. Dunae's reference to an 'ex-pit boy' from the Derbyshire coal fields (John Oliver) who became a premier of British Columbia suggests that men who crossed the Atlantic not as first class cabin but as steerage passengers might also leave their mark. The men who established the Barr colony on the prairies were not from the 'Norfolk' jackets, straw boaters, and riding boots class. They were from a variety of occupations — clerks, tradesmen, artisans, mechanics and agricultural labourers. Significantly, as Dunae points out, the Barr colony succeeded 'because it avoided the mistakes' of such gentlemen's aristocratic colonies as Cannington Manor.

While insisting that the gentlemen emigrants 'played a seminal role in the country's development', Dunae admits that the assessment of the legacy of the group would require another study. This work indicates the potential of a more critical analysis of the impact of the group but as it stands it claims too much without the supporting explicit evidence, and leaves the impression that the élite group may have been, in many ways, outside the mainstream of Canadian social development.

*Hartwell Bowsfield, archivist and associate professor of history at York University, is general editor of the Hudson's Bay Record Society.*

**A. Y. JACKSON**
**THE ARCTIC 1927**

By A.Y. Jackson; introduction by Naomi Jackson Groves. Penumbra Press, Moonbeam, Ont., 1982. 137 pp., illus. $26.00.

*Reviewed by Terence Shortt*

This book is a celebration of the centenary of A. Y. Jackson's birth, an attractive tribute to the grand old man of Canadian art and a reminder of the days when prerequisites of fine art

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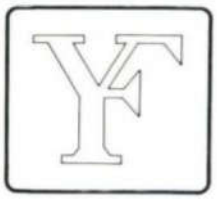

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were incisive observation and proficient drawing.

It is the chronicle of Jackson's 12,000-mile voyage on the government's S.S. *Beothic*, on its annual tour of the Eastern Arctic. That year it reached Bache Peninsula post, at that time the most northerly settlement in the world, and went as far west as Beechey Island. Trading posts were visited, Royal Canadian Mounted Police posts established or resupplied, and personnel changed.

Jackson's fellow voyagers were a distinguished assemblage. In charge was G. P. Mackenzie, a seasoned arctic hand, the almost legendary Dr L. D. Livingstone, Dr Frederick Banting, Dr Herschel Stringer, Sgt A. H. Joy of the RCMP, one of the greatest arctic travellers of all time, and—perhaps the most illustrious of them all, Dr M. O. Malte, chief botanist at the National Herbarium.

There have been many publications featuring Jackson's artwork but this is, I believe, the most intimate of them all. Its very simplicity places us with him on his first arctic voyage. We are, in effect, looking over his shoulder as he sketches and listening to his impressions, for it is composed of some 89 field sketches in pencil and conté and two diaries which he kept simultaneously. Would that more biographical essays were done in this style, for we get to know Jackson better in this small volume than in other more flamboyant ones. There is no dialectical analysis here; the drawings speak for themselves and like all good sketches they likely say something different to each observer. They have the kind of economy that stamps them as *aide-mémoires*. For example, it is useful to compare the pencil draft of Bache Peninsula post with the pen rendering he did from it later and which was reproduced in his book *The Far North, A Book of Drawings*. Without wishing to detract from the studio treatment, I prefer the immediacy of the on-location sketch. The pencil drawings represent more than a casual viewer might think. They are dotted with his own brand of shorthand notes, colour notations, numbers and other marks. Of special interest to me are the small lightly pencilled numbers cryptically distributed over many of the drawings. I surmise these to be tonal code numbers of a system he had devised to indicate relative lightness and darkness as an aid to gaining tonal perspective in the event that he chose to 'paint up' one of the sketches at a later date in the studio. I often used a similar system based on a modification of the Munsell Color System. This kind of cryptography can be extremely useful when time is short or light values are apt to change dramatically. Do not confuse this with 'painting by numbers' although I suppose there is a relationship between the two. One might marvel more at the frugality of line and sureness of stroke of the pencil had not one seen this same kind of confident delineation executed by other giants of that age of fine draw-

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# THE HUDSON'S BAY COMPANY AND THE FUR TRADE: 1670-1870*

BY GLYNDWR WILLIAMS, B.A., Ph.D.
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**In Spring 1983, this issue was advertised as 'The Hudson's Bay Company, 1670-1870.'*

ing; Varley, FitzGerald, Grandmaison, Thoreau MacDonald, Roy Fisher, Carl Schaefer, Casson and others. To the artists of that period the pencil was not a tool to be battled with like a garden shovel; rather it was an extension of the human nervous system connected to the eyes and brain as assuredly as were the fingertips. When working they were unmindful of its very existence (unless the lead broke!). Too, one is impressed by the quantity of work achieved by Jackson on this one trip. Malte recorded that he managed 77 hours ashore during the 51-day voyage and it can be assumed that Jackson got no more. Many of those hours had to be spent trudging over rough terrain in order to achieve a vantage point for a composition. Some of the sketches had to remain unfinished as the ship's whistle signalled imminent departure.

The diaries are terse and pleasant in a whimsical sort of way but they reveal the artist's verdancy about things arctic as when he writes that he visited some 'ingloos'—summer tents generally known as *tupiks*. And again he refers to 'Aukpaks' (thick-billed murre) as 'probably dwarf penguins.'

Jackson does Dr Malte a slight injustice when he speaks of his rushing off with a potato bag and again saying that his girth was so great that 'he can't bend over so he lies down' to collect his plants. Malte did indeed carry a burlap sack or two when collecting. The conventional botanist's vasculum was quite inadequate to hold the quantity of specimens he would gather in a few hours. He wrapped his plants separately in rolls of paper and dropped them into his sack. At times on his return from a field trip with a bulging bag at the end of each arm he resembled a refuse collector. In 1927 he brought out some 4,000 herbarium sheets and on that trip developed new techniques for collecting and preserving plants. One innovation was placing his plant press on the fiddley ladder, the grating over the boiler in the engine room. This produced more rapid drying and preserved the colours of flowers and foliage better than traditional methods. And being the consummate botanist, he was as interested in the cryptogams (mosses and ferns) as he was in the flowering plants. Many of these were small and when Malte found a promising spot he would lie down and search for desirable specimens with a hand lens. One *would* see him lying prone with a bulging 'potato sack' at his elbow. The ways of the biologist often seem queer to the layman.

After browsing through this book one experiences a touch of regret with the realization that the contact with the Arctic of artists such as Jackson was of necessity so superficial. The once-a-year arrival of a big steamship at those remote outposts created an artificially festive atmosphere. Eskimos had crowded into the area in anticipation and normal activity had been abandoned as they observed with silent amusement the frenzied bustle of the white man. *They* were the spectators; *we* the entertainers. Almost all of the artists who visited the Arctic drew and painted the same scene: the native tents, the tethered dogs, the watching Inuit, icebergs and mountain backdrops. These things are but a small part of the story of the immense islands that comprise the Arctic Archipelago.

*Artist and ornithologist Terence Shortt of Toronto retired in 1976 as chief of display biology with the Royal Ontario Museum. He travelled on a number of arctic expeditions.*

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**Simon Peter Gunanoot**
**TRAPLINE OUTLAW**

By David R. Williams. Sono Nis Press, Victoria, B.C., 1982. 170 pp., illus. $12.95.

*Reviewed by R. J. Bowen*

The subject of this book, Simon Peter Gunanoot, was a respected Indian businessman in the Hazelton area of northern British Columbia at the beginning of this century. He and his wife Sarah owned and operated a fur-trading store at Kispiox, a few miles north of Hazelton, and from his ranch at Anlaw on the opposite bank of the Skeena, Gunanoot ran a small pack-train of horses.

On a June morning in 1906 the bodies of two white men—both had been shot—were found on trails near Hazelton. Gunanoot and Sarah's brother, Peter Himadam, headed the police list of suspected murders. Not trusting the legal system, the two Indians with their families headed north into the bush. The police immediately clapped Johnson Nah-gun, Gunanoot's aged father, into jail—a virtual hostage. Nah-gun foiled the police by escaping custody during a trip to the jail's outhouse. Within a day he joined the two Indian families in their flight northward.

The police formed posses, the government offered rewards, and Pinkerton's Detective Agency was hired. All attempts to capture Gunanoot and Himadam were to no avail.

The author of *Trapline Outlaw*, David Ricardo Williams, Q. C., has done an immense amount of research in old police files and law libraries and he documents the case with all his considerable legal skill. His conclusion is that the phantom outlaw who eluded capture in the bush for thirteen years was probably guilty of the murders. He had been found 'not guilty' by the Supreme Court of British Columbia in 1919.

In spite of his extensive research, the author occasionally gets confused about the very confusing geography of northern British Columbia. He writes, 'the Iskut which, flowing northward...'. When I was in the Iskut area half a century ago there was a delightful little tent-town called Kluachone at the very head of the Iskut. From Kluachone the Iskut flows south through a string of lakes, eventually to join the Stikine near the boundary between British Columbia and Alaska. The 'arctic birch' in the northern interior of British Columbia are no doubt scrub willow (the browse of moose). On the map and throughout the text, Fort Connolly, the Hudson's Bay Company trading post at Bear Lake on the upper waters of the Skeena, is spelled incorrectly.

In spite of minor errors regarding the terrain, *Trapline Outlaw* is an excellent book—the definitive work on the legal proceedings against Gunanoot. The photographs, most of them 'courtesy Provincial Archives of British Columbia', carry the reader back to an earlier era.

*Mr Bowen was brought up on the banks of the Skeena River. He trapped and prospected in that area of northern British Columbia where Gunanoot lived as an outlaw for thirteen years.*

# HOW TO BUILD YOUR BAR TO FIT YOUR BUDGET